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Wisconsin Timber Industry —an Assessment of Timber Product Output and Use

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FOREWORD

In this bulletin we highlight recent Wisconsin forest industry trends and report the results of a detailed study of forest industry, industrial roundwood production, and associated primary mill wood and bark residue in Wisconsin in 1986. Such detailed information is necessary for intelligent planning and decision making in wood procurement, forest resource management, and forest industry development. Likewise, researchers need current forest industry and industrial roundwood information for planning projects.

Special thanks are given to the primary wood-using firms that supplied information for this study and to the Wisconsin Department of Natural Resources foresters who canvassed these respondents. Their cooperation is greatly appreciated.

All board foot data in this report have been converted to International 1/4-inch scale by applying a multiplier of 1.08 to all saw-log volume reported in Scribner Dec. C scale by sawmills, a multiplier of 1.04 to all veneer log volume reported in Scribner Dec. C scale by veneer mills, a multiplier of 1.38 to all saw-log volume reported in Doyle scale by sawmills, and a multiplier of 1.14 to all veneer log volume reported in Doyle scale by veneer mills.

The last detailed study of industrial roundwood output was in 1981. Most comparisons in this report are with the 1981 study results. Quantities shown may vary slightly from one table to another because of rounding differences, but these differences are insignificant.

Wisconsin is divided into five Survey Units (fig. 1).

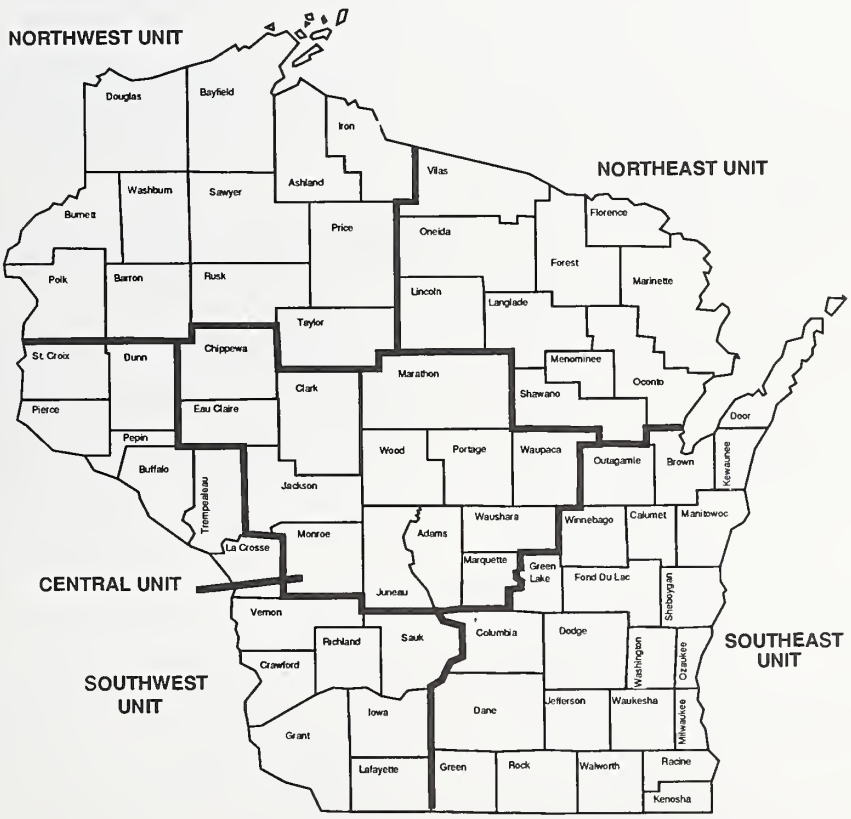

Figure 1.–*Wisconsin Survey Units.*

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Wisconsin Timber Industry–An Assessment of Timber Product Output and Use

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HIGHLIGHTS

Primary Timber Industry—Industrial Roundwood

- The number of active primary wood-using mills fell from 663 in 1981 to 506 in 1986. Most of the decline was in small sawmills (mills cutting less than 1 million board feet annually).
- Of the 506 active mills in 1986, 457 were sawmills widely distributed throughout Wisconsin. However, 13 of the 21 largest sawmills are in the two northern Wisconsin Survey Units.
- Log and bolt receipts at active mills in Wisconsin were 326.9 million cubic feet, up 6 percent from 1981.
- Industrial roundwood production climbed to 309.1 million cubic feet in 1986 from 260.6 million cubic feet in 1981.
- Two-thirds of the industrial roundwood was pulpwood; another 29 percent was saw logs.

Timber Removals

- Timber removals from growing stock on timberland for industrial roundwood was 289.1 million cubic feet.
- Sixty-four percent of the growing-stock removals for industrial roundwood was harvested for pulpwood, 32 percent was harvested for saw logs, and the remainder was harvested for other products.
- Of the growing-stock removals for industrial roundwood, 38 percent was aspen, 13 percent was red oak, 8 percent was hard maple, and 7 percent each was red pine and white birch.
- The Northeast and Northwest Survey Units accounted for 71 percent of the growing-stock removals.
- Timber removals from sawtimber on timberland for industrial roundwood was 874.4 million board feet of which 53 percent was cut for saw logs and 41 percent was cut for pulpwood.
- Major components of the sawtimber removals were aspen (34 percent), red oak (20 percent), and hard maple (11 percent).

Logging Residue

- During the 1986 industrial roundwood harvest, an estimated 124.6 million cubic feet of logging residue was generated. Total residue generated is equivalent to 1,577,000 cords of pulpwood, enough wood to supply six, 550 ton/day pulp mills for 1 year.
- Approximately 70 percent of the logging residue was generated in the two northern Survey Units.
- Five counties—Forest, Marinette, Oneida, Bayfield, and Sawyer—each produced more than 5 million cubic feet of logging residue.

Pulpwood[1]

- Wisconsin produced a record high 2.93 million cords of pulpwood in 1986, up 22 percent from 1981.
- Nine out of ten cords were roundwood; the remainder was wood residue from sawmills, veneer mills, and other mills.
- Aspen constituted 46 percent of the roundwood harvest.
- Wisconsin mills used 92 percent of the pulpwood produced in Wisconsin; Michigan and Minnesota used the remainder.
- Four-fifths of the roundwood pulpwood came from the two northern Survey Units.

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[1] *Includes logs and bolts used to manufacture pulp, particleboard, and waferboard.*

- Aspen, pine, and birch climbed to record production levels in 1986.
- Wisconsin pulp mills received 3.27 million cords of pulpwood in 1986, a gain of 4 percent from 1981.
- Roundwood accounted for 87 percent of Wisconsin pulpwood receipts in 1986 and 84 percent in 1981.
- Wisconsin is becoming less dependent on imported pulpwood. In 1986 Wisconsin mills imported 18 percent of their pulpwood requirements from out-of-State compared with 26 percent in 1981.

Saw Logs

- Saw log production rose from 491 million board feet in 1981 to 510 million board feet in 1986, a rise of 4 percent.
- Primary production gains over 1981 were in red oak (32 million board feet), hard maple (13 million board feet), and red pine (9 million board feet).
- Production declines from 1981 were principally in elm (33 million board feet) and white pine (10 million board feet).
- Principal species cut for saw logs were red oak (164 million board feet), aspen (79 million board feet), and hard maple (60 million board feet).
- Wisconsin sawmills used 98 percent of the saw logs harvested in 1986; Minnesota and Michigan used the balance.
- Leading saw log producing counties were Forest, Marinette, Oconto, and Marathon.
- More than 450 Wisconsin sawmills received a total of 534 million board feet of saw logs in 1986. Imports came chiefly from Michigan (28 million board feet) and Minnesota (8 million board feet).
- Average lumber output per sawmill was 1.17 million board feet.

Veneer Logs

- Wisconsin's veneer log harvest was 26.2 million board feet, 4 percent lower than in 1981, but 14 percent higher than in 1984.
- Principal species harvested were red oak (11.2 million board feet) and hard maple (4.4 million board feet).
- Among species, the largest production increase from 1981 was in red oak (5.2 million board feet) and the largest decline was in aspen (9.8 million board feet).
- Veneer mills in Wisconsin used 88 percent of Wisconsin veneer logs; Michigan mills used the rest.
- Fifteen Wisconsin veneer mills received 37.6 million board feet of veneer logs, a rise of 9 percent since 1981. Michigan supplied 13.0 million board feet of the 14.5 million board feet of logs from out-of-State.
- Veneer log receipts from Minnesota, other States (excluding Michigan), and Canada were the lowest recorded since 1946.
- Red oak (14.1 million board feet) and hard maple (11.4 million board feet) were the principal veneer species used in Wisconsin. Michigan supplied the major share of hard maple logs.

Other Industrial Roundwood Products

- Output of all other industrial roundwood products (includes commercial posts, industrial fuelwood, shaving bolts, excelsior bolts, etc.) totalled 7.8 million cubic feet of which 46 percent was industrial fuelwood.

Primary Mill Residue

- During 1986, Wisconsin primary wood-using mills (except the pulp, flakeboard, and particleboard mills) generated 744,000 green tons of coarse residue, 466,000 green tons of fine residue, and 332,000 green tons of bark.
- Most of the residue was used: 98 percent of the coarse, 94 percent of the fine, and 90 percent of the bark residue.
- By type of residue, the dominant use was in fiber products for coarse residue, in miscellaneous products (such as mulch, livestock bedding, and poultry litter) for fine residue, and in industrial fuel for bark.
- Counties each producing more than 50,000 green tons of coarse and fine residue in 1986 were Forest, Marinette, Shawano, Vilas, and La Crosse.

APPENDIX

Study Methods

Data for this publication come from canvassing (with a formal questionnaire) all the known primary wood-using mills that use Wisconsin logs and bolts. The study was a cooperative effort of the Wisconsin Department of Natural Resources (WDNR) and the North Central Forest Experiment Station (NCFES).

The Michigan Department of Natural Resources supplied information for their primary mills using Wisconsin wood during another cooperative study

with the NCFES. The NCFES mailed formal questionnaires to all pulp, particleboard, and waferboard mills (except in Michigan) using Wisconsin pulpwood. All other canvassing was done by the WDNR using mail contacts initially; follow-up on nonrespondents was by telephone and personal contacts. WDNR utilization and marketing specialists provided estimates based on prior knowledge and contacts for Wisconsin mills that did not furnish complete data.

Logging utilization factors were used to estimate timber removals and logging residue. These factors were determined from earlier Wisconsin logging studies by the NCFES.

The NCFES edited and compiled the data.

Sampling Error

Because all primary wood-using mills were canvassed, there is no sampling error for the roundwood products they used or the wood and bark residue they generated.

Common and Scientific Names of Tree Species Mentioned

SOFTWOODS
- Jack pine ..... *Pinus banksiana*
- Red pine ..... *Pinus resinosa*
- Eastern white pine ..... *Pinus strobus*
- White spruce ..... *Picea glauca*
- Black spruce ..... *Picea mariana*
- Balsam fir ..... *Abies balsamea*
- Eastern hemlock ..... *Tsuga canadensis*
- Tamarack ..... *Larix laricina*
- Northern white-cedar ..... *Thuja occidentalis*

HARDWOODS
- White oaks
  - White oak ..... *Quercus alba*
  - Swamp white oak ..... *Quercus bicolor*
  - Bur oak ..... *Quercus macrocarpa*
  - Chinkapin oak ..... *Quercus muehlenbergii*
- Red oaks
  - Northern red oak ..... *Quercus rubra*
  - Northern pin oak ..... *Quercus ellipsoidalis*
  - Black oak ..... *Quercus velutina*
- Hickory
  - Shagbark hickory ..... *Carya ovata*
  - Bitternut hickory ..... *Carya cordiformis*
- Yellow birch ..... *Betula alleghaniensis*
- Hard maples
  - Sugar maple ..... *Acer saccharum*
  - Black maple ..... *Acer nigrum*
- Soft maples
  - Red maple ..... *Acer rubrum*
  - Silver maple ..... *Acer saccharinum*
- Ashes
  - White ash ..... *Fraxinus americana*
  - Black ash ..... *Fraxinus nigra*
  - Green ash ..... *Fraxinus pennsylvanica*
- Balsam poplar ..... *Populus balsamifera*
- Eastern cottonwood ..... *Populus deltoides*
- Aspens
  - Bigtooth aspen ..... *Populus grandidentata*
  - Quaking aspen ..... *Populus tremuloides*
- American basswood ..... *Tilia americana*
- Beech ..... *Fagus grandifolia*
- Black walnut ..... *Juglans nigra*
- Elms
  - American elm ..... *Ulmus americana*
  - Slippery elm ..... *Ulmus rubra*
  - Rock elm ..... *Ulmus thomasii*
- White birch ..... *Betula papyrifera*
- Other hardwoods
  - Boxelder ..... *Acer negundo*
  - Black locust ..... *Robinia pseudoacacia*
  - Honeylocust ..... *Gleditsia triacanthos*
  - River birch ..... *Betula nigra*
  - Red mulberry ..... *Morus rubra*
  - Northern catalpa ..... *Catalpa speciosa*
  - Sycamore ..... *Platanus occidentalis*
  - Black cherry ..... *Prunus serotina*
  - Butternut ..... *Juglans cinerea*
  - Hackberry ..... *Celtis occidentalis*
  - Black willow ..... *Salix nigra*

Definition of Terms

Coarse mill residue.—Wood residue suitable for chipping such as slabs, edgings, and veneer cores.

Consumption.—The quantity of a commodity, such as pulpwood, utilized.

Fine mill residue.—Wood residue not suitable for chipping such as sawdust and veneer clippings.

Forest Survey Unit.—A geographical area (group of counties) used by the Forest Inventory and Analysis Project to report periodic inventories and use of the Nation's forest resources.

Growing-stock trees.—All live poletimber and sawtimber trees of commercial species except rough and rotten trees. Poletimber trees are 5.0 to 8.9 inches d.b.h. for softwoods and 5.0 to 10.9 inches d.b.h. for hardwoods. Softwood sawtimber trees are 9.0 inches d.b.h. or larger; hardwood sawtimber trees are 11.0 inches d.b.h. or larger.

Industrial roundwood products.—Saw logs, pulpwood, veneer logs, poles, commercial posts, piling, cooperage logs, industrial fuelwood, shaving bolts, lath bolts, charcoal bolts, and chips from roundwood used for pulp or board products. Pulpwood includes logs and bolts used to manufacture pulp, particleboard, and waferboard.

Industrial roundwood production.—The quantity of industrial roundwood harvested in a geographic area.

Industrial roundwood receipts.—The quantity of industrial roundwood received in a geographic area, regardless of the geographic source.

Logging residue.—The unused portions of all trees cut or killed by logging. Includes unused tops and limbs. Does not include bark.

Primary wood-using mills.—Mills receiving roundwood or chips from roundwood for processing into products.

Primary wood-using mill residue.—Wood materials (coarse and fine) and bark generated at manufacturing plants from roundwood processed into principal products. These residues include wood products (byproducts) obtained incidental to production of principal products and wood materials not utilized for some product.

Roundwood.—Logs, bolts, or other round sections cut from trees (including chips from roundwood).

Standard cord.—A stack of wood bolts (or the equivalent) encompassing 128 cubic feet of wood, bark, and air space. A cord of pulpwood contains 79 cubic feet of wood and 49 cubic feet of bark and air space. A cord of fuelwood contains 70 cubic feet of wood and 58 cubic feet of bark and air space.

Timberland.—Forest land producing or capable of producing crops of industrial wood and not withdrawn from timber utilization. (Note: Areas qualifying as timberland are capable of producing more than 20 cubic feet per acre per year of annual growth when managed. Currently inaccessible and inoperable areas are included except when the areas involved are small and unlikely to become suitable for producing industrial wood in the foreseeable future.) Formerly this was referred to as commercial forest land.

Timber removals from growing stock for industrial roundwood.—The volume of sound bole wood (between a 1-foot stump and a minimum top diameter of 4.0 inches outside bark or to a point where the central stem breaks into limbs) in poletimber and sawtimber growing-stock trees on timberland removed annually for industrial roundwood products (including logging residues).

Timber removals from sawtimber for industrial roundwood.—The volume of sound bole wood (between a 1-foot stump and the point on the bole above which a saw log cannot be produced) in sawtimber growing-stock trees on timberland removed annually for industrial roundwood products (including logging residues). The minimum saw log top is 7.0 inches diameter outside bark for softwoods and 9.0 inches diameter outside bark for hardwoods.

Table Titles

Table 1.—Output of industrial roundwood products by species group, Wisconsin, 1981 and 1986

Table 2.—Output of industrial roundwood products by type of product, Wisconsin, 1986

Table 3.—Number of active primary wood-using mills by Forest Survey Unit and kind of mill, Wisconsin, 1956, 1973, 1981, and 1986

Table 4.—Roundwood receipts by type of mill in Wisconsin, 1956, 1967, 1973, 1981, and 1986

Table 5.—Timber removals from growing stock on timberland for industrial roundwood by species group, Forest Survey Unit, and county in Wisconsin, 1986

Table 6.—Timber removals from sawtimber on timberland for industrial roundwood by species group, Forest Survey Unit, and county in Wisconsin, 1986

Table 7.—Logging residue generated during industrial roundwood production by species group, Forest Survey Unit, and county, Wisconsin, 1986

Table 8.—Wisconsin pulpwood production by species group, 1946-1986

Table 9.—Wisconsin pulpwood production by species group and destination, 1986

Table 10.—Pulpwood production from roundwood by species group, Forest Survey Unit, and county, Wisconsin, 1986

Table 11.—Pulpwood receipts in Wisconsin by species group, 1946-1986

Table 12.—Pulpwood receipts in Wisconsin by species group and area of origin, 1986

Table 13.—Saw log production and receipts in Wisconsin by species group, 1981 and 1986

Table 14.—Saw log production by Forest Survey Unit, species group, and State of destination, Wisconsin, 1986

Table 15.—Saw log production by Forest Survey Unit, county, and species group, Wisconsin, 1986
Table 16.—Saw log receipts in Wisconsin by Forest Survey Unit, species group, and State of origin, 1986
Table 17.—Veneer log production and receipts in Wisconsin for selected years, 1946-1986
Table 18.—Veneer log production and receipts in Wisconsin by species group, 1981 and 1986
Table 19.—Veneer log production by species group and State of destination, Wisconsin, 1986
Table 20.—Veneer log production by Forest Survey Unit, county, and species group, Wisconsin, 1986
Table 21.—Veneer log receipts in Wisconsin by area of origin for selected years, 1946-1986
Table 22.—Veneer log receipts in Wisconsin by species group and area of origin, 1986
Table 23.—Production of poles, piling, commercial posts, and miscellaneous industrial roundwood products[1] by Forest Survey Unit, county, and species group, Wisconsin, 1986
Table 24.—Output of industrial roundwood products by type of product and species group, Wisconsin, 1986
Table 25.—Residue produced at primary wood-using mills by type of material, type of use, and county, Wisconsin, 1986

[1]*Cabin logs, excelsior bolts, shingle bolts, charcoal bolts, and shaving bolts. Excludes fuelwood used by industry.*

Table 1.--Output of industrial roundwood products by species group, Wisconsin, 1981 and 1986

(In million cubic feet)

Product	All species		Softwoods		Hardwoods	
	1981	1986	1981	1986	1981	1986
Pulpwood[1/]	165.6	208.0	46.1	48.5	119.5	159.5
Saw logs	86.0	89.1	13.4	11.4	72.6	77.7
Fuelwood[2/]	3.2	3.6	0.6	0.6	2.6	3.0
Veneer logs	4.4	4.2	[3/]	0.1	4.4	4.1
Posts[2/]	0.5	0.5	0.5	0.5	--	--
Cooperage logs	0.1	--	--	--	0.1	--
Poles & piling	0.1	0.3	0.1	0.3	[3/]	[3/]
Other[4/]	0.7	3.4	--	0.3	0.7	3.1
All products	260.6	309.1	60.7	61.7	199.9	247.4

[1/] Includes particleboard and waferboard bolts.
[2/] Estimated for 1981.
[3/] Less than 50 thousand cubic feet.
[4/] Includes logs and bolts used for excelsior, shavings, charcoal, and other specialty products.

Table 2.--Output of industrial roundwood products by type of product, Wisconsin, 1986

Product	Standard units	All species	Softwoods	Aspen	Other hardwoods	All species	Softwoods	Aspen	Other hardwoods
		Thousand standard units				Thousand cubic feet			
Pulpwood[1/]	Standard cords[2/]	2,634	615	1,208	811	208,009	48,519	95,452	64,038
Saw logs	Board feet[3/]	510,099	64,554	79,054	366,491	89,106	11,392	13,801	63,913
Fuelwood	Standard cords[2/]	52	9	27	16	3,616	599	1,885	1,132
Veneer logs	Board feet[3/]	26,203	691	3,178	22,334	4,243	111	517	3,615
Posts	Pieces	522	522	--	--	531	531	--	--
Poles	Pieces	31	31	--	--	263	263	--	--
Other[4/]	Cubic feet	3,381	254	3,098	29	3,381	254	3,098	29
All products		--	--	--	--	309,149	61,669	114,753	132,727

[1/] Includes particleboard and waferboard bolts.

[2/] Contains 128 cubic feet, including wood, bark, and air space.

[3/] International 1/4-inch rule.

[4/] Includes piling, excelsior, shavings, charcoal, and other specialty products.

Table 3.--Number of active primary wood-using mills by Forest Survey Unit and kind of mill, Wisconsin, 1956, 1973, 1981, and 1986

	All units				Northeast Unit			Northwest Unit			Central Unit			Southwest Unit			Southeast Unit		
Kind of mill	1956	1973	1981	1986	1973	1981	1986	1973	1981	1986	1973	1981	1986	1973	1981	1986	1973	1981	1986
Pulp mills	29	24	23	21	6	5	4	3	3	3	8	8	8	--	--	--	7	7	6
Saw mills																			
Large[1/]	8	15	23	21	10	12	11	1	3	1	2	3	2	1	3	5	1	2	2
Medium[2/]	55	101	110	103	23	19	20	19	21	22	25	33	27	27	34	26	7	3	8
Small[3/]	1,565	411	480	333	93	111	81	73	117	72	95	87	58	75	78	52	75	87	70
All sawmills	1,628	527	613	457	126	142	112	93	141	95	122	123	87	103	115	83	83	92	80
Veneer mills	47	19	15	15	5	4	4	5	6	6	4	2	2	--	--	--	5	3	3
Misc. plants[4/]	49	13	12	15	3	4	7	2	2	5	3	2	1	4	3	2	1	1	--
Total	1,753	583	663	506	140	155	127	103	152	109	137	135	98	107	118	85	96	103	89

[1/] Annual lumber production of 5 million board feet or more.

[2/] Annual lumber production from 1 million to 4.999 million board feet.

[3/] Annual lumber production less than 1 million board feet.

[4/] Includes waferboard, particleboard, treating, fence, excelsior, and specialty plants.

Table 4.--Roundwood receipts by type of mill in Wisconsin, 1956, 1967, 1973, 1981 and 1986

(In million cubic feet)

Type of mill	All species					Softwoods					Hardwoods				
	1956	1967	1973	1981	1986	1956	1967	1973	1981	1986	1956	1967	1973	1981	1986
Pulpmills[1]	164.3	195.1	179.2	208.7	224.0	89.8	79.4	63.0	62.7	55.9	74.5	115.7	116.2	146.0	168.1
Sawmills	67.8	47.8	68.0	94.4	93.2	14.5	5.1	8.8	15.8	11.3	53.3	42.7	59.2	78.6	81.9
Other mills[2]	21.5	12.0	12.5	6.6	9.7	[3]	[3]	[3]	0.2	0.4	21.5	12.0	12.5	6.4	9.3
All mills	253.6	254.9	259.7	309.7	326.9	104.3	84.5	71.8	78.7	67.6	149.3	170.4	187.9	231.0	259.3

[1] Includes particleboard and waferboard mills in 1981 and 1986.

[2] Does not include treating plants; includes particleboard mills in 1967 and 1973.

[3] Less than 0.05 million cubic feet.

Table 5.--Timber removals from growing stock on timberland for industrial roundwood by species group, Forest Survey Unit, and county in Wisconsin, 1986

(In thousand cubic feet)

Unit and county	All species	Species group												
		Cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tamarack	Ash	Aspen	Balsam poplar	Basswood	Beech
Northeast Unit														
Florence	9,764	84	386	337	518	289	66	260	7	66	3,327	--	276	2
Forest	15,838	82	659	268	52	861	129	485	6	333	6,000	--	723	23
Langlade	9,547	46	169	83	173	610	89	49	--	274	3,757	--	354	5
Lincoln	10,699	19	214	195	294	528	155	76	7	275	5,045	--	250	8
Marinette	18,125	222	467	48	1,383	555	142	187	8	149	9,533	12	221	13
Menominee	6,315	13	--	1,286	324	173	525	--	--	34	1,323	--	352	153
Oconto	9,135	76	127	83	211	889	82	15	13	128	4,635	--	240	11
Oneida	12,167	109	460	98	745	1,047	422	366	24	174	4,825	--	186	--
Shawano	5,310	72	6	132	54	411	148	2	2	159	1,459	--	350	31
Vilas	11,644	115	195	139	748	443	321	141	10	65	5,728	--	146	2
Total	108,544	838	2,683	2,669	4,502	5,806	2,079	1,581	77	1,657	45,632	12	3,098	248
Northwest Unit														
Ashland	6,774	6	256	36	96	336	216	339	15	131	2,763	--	159	--
Barron	4,748	--	2	--	26	82	119	--	--	53	3,130	--	151	--
Bayfield	15,466	--	41	--	1,414	1,046	288	6	--	64	8,589	64	76	--
Burnett	4,451	--	--	--	1,035	346	115	2	4	15	2,449	--	24	--
Douglas	9,472	--	27	2	1,751	736	88	11	2	64	5,334	52	12	--
Iron	7,677	104	51	48	63	186	201	45	--	89	3,722	--	188	2
Polk	2,168	--	--	--	166	27	68	--	--	34	1,047	--	58	--
Price	10,112	2	234	134	149	306	139	110	11	466	3,789	--	333	--
Rusk	7,062	--	1	12	1	103	99	4	2	228	3,362	--	474	--
Sawyer	12,312	--	64	49	86	362	277	121	2	305	6,087	--	490	--
Taylor	7,292	--	161	145	32	355	100	30	2	258	3,091	--	268	--
Washburn	9,332	--	4	--	922	565	183	2	--	142	5,784	12	103	--
Total	96,866	112	841	426	5,741	4,450	1,893	670	38	1,849	49,147	128	2,336	2
Central Unit														
Adams	3,195	--	2	--	1,081	1,681	145	--	--	3	85	--	2	--
Chippewa	3,984	--	4	4	43	163	177	6	--	121	1,599	--	105	--
Clark	7,930	--	4	2	345	192	83	2	--	273	3,392	--	225	--
Eau Claire	2,965	--	--	2	396	630	48	2	--	21	1,139	--	19	--
Jackson	4,305	--	--	6	1,790	629	125	--	--	14	525	--	7	--
Juneau	3,894	--	--	--	1,588	569	81	--	--	39	389	--	33	--
Marathon	8,832	8	27	84	83	484	133	19	8	207	3,693	--	341	6
Marquette	996	--	--	--	129	454	105	--	--	12	19	--	1	--
Monroe	2,946	--	--	--	528	479	76	--	--	10	61	--	43	--
Portage	2,878	28	2	12	286	768	219	30	--	35	581	--	39	--
Waupaca	3,993	19	--	35	12	631	202	--	--	78	1,343	--	153	7
Waushara	2,434	--	--	--	188	1,610	188	--	--	11	86	--	32	--
Wood	4,145	--	--	--	526	468	144	2	--	58	1,618	--	62	--
Total	52,497	55	39	145	6,995	8,758	1,726	61	8	882	14,530	--	1,062	13

(Table 5 continued on next page)

(Table 5 continued)

Unit and county	All species	Species group												
		Cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tamarack	Ash	Aspen	Balsam poplar	Basswood	Beech
Southwest Unit														
Buffalo	3,091	--	--	--	2	81	6	2	--	31	360	--	92	--
Crawford	2,511	--	--	--	--	2	--	--	--	10	9	--	76	--
Dunn	3,248	--	--	--	170	616	214	--	--	77	236	--	147	--
Grant	1,204	--	--	--	--	1	2	--	--	7	10	--	58	--
Iowa	1,276	2	--	--	--	10	5	--	--	6	7	--	51	--
La Crosse	2,725	--	--	--	24	117	8	--	--	1	18	--	61	--
Lafayette	23	--	--	--	1	--	--	--	--	--	--	--	6	--
Pepin	798	--	--	--	--	5	1	6	--	11	51	--	57	--
Pierce	768	--	--	--	1	3	5	--	--	17	20	--	64	--
Richland	1,294	--	--	--	1	--	3	--	--	16	44	--	77	--
St. Croix	597	--	--	--	1	103	7	--	--	20	17	--	52	--
Sauk	2,023	--	--	--	11	121	9	--	--	39	56	--	76	--
Trempealeau	2,823	--	--	--	2	202	22	7	--	19	469	--	23	--
Vernon	2,958	--	--	--	--	--	--	--	--	14	26	--	91	--
Total	25,339	2	--	--	213	1,261	282	15	--	268	1,323	--	931	--
Southeast Unit														
Brown	374	--	--	5	--	6	9	--	--	33	54	--	9	6
Calumet	72	--	--	--	--	--	--	--	--	21	--	--	5	--
Columbia	1,156	--	--	--	19	394	16	--	--	12	16	--	49	--
Dane	396	3	--	--	--	--	--	--	--	3	6	--	11	--
Dodge	324	1	--	--	--	--	--	--	--	7	2	--	37	2
Door	408	33	1	8	--	23	49	3	2	19	123	2	9	3
Fond du Lac	181	--	--	--	--	--	--	--	--	5	--	--	10	--
Green	88	--	--	--	--	--	--	--	--	1	--	--	--	--
Green Lake	110	--	--	--	1	72	4	--	--	--	1	--	--	--
Jefferson	105	--	--	--	--	--	--	--	--	2	--	--	1	--
Kenosha	11	--	--	--	--	6	--	--	--	--	--	--	--	--
Kewaunee	145	11	--	1	1	4	9	--	--	11	7	--	6	2
Manitowoc	419	43	--	5	--	--	44	--	--	40	11	--	17	10
Outagamie	353	--	--	--	--	35	4	2	--	23	125	--	14	6
Ozaukee	4	--	--	--	--	2	--	--	--	1	--	--	--	--
Racine	10	1	--	--	--	--	--	--	--	--	--	--	--	--
Rock	133	--	--	--	--	--	--	--	--	2	--	--	--	--
Sheboygan	845	1	--	--	--	2	11	--	--	73	3	--	51	18
Walworth	144	--	--	--	--	28	--	--	--	1	--	--	6	--
Washington	312	--	--	--	--	--	--	--	--	24	--	--	42	2
Waukesha	97	--	--	--	--	42	16	--	--	6	--	--	2	--
Winnebago	147	--	--	--	--	--	--	--	--	3	2	--	10	--
Total	5,834	93	1	19	21	614	162	5	2	287	350	2	279	49
State Total	289,080	1,100	3,564	3,259	17,472	20,889	6,142	2,332	125	4,943	110,982	142	7,706	312

(Table 5 continued on next page)

(Table 5 continued)

Unit and county	Species group										
	White birch	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Other hard-woods
Northeast Unit											
Florence	1,199	425	--	78	--	1,902	349	167	5	--	21
Forest	1,222	327	5	516	1	2,913	957	135	9	--	132
Langlade	827	122	--	78	7	1,959	629	212	16	--	88
Lincoln	572	85	--	346	7	1,315	1,038	216	13	--	41
Marinette	1,899	96	1	129	--	870	695	1,418	55	--	22
Menominee	66	196	--	126	2	1,288	167	262	5	--	20
Oconto	659	31	13	452	10	490	414	530	19	--	7
Oneida	1,774	125	--	48	2	1,034	523	175	11	--	19
Shawano	150	33	--	96	10	881	435	761	77	--	41
Vilas	1,778	124	--	50	--	988	334	292	13	--	12
Total	10,146	1,564	19	1,919	39	13,640	5,541	4,168	223	--	403
Northwest Unit											
Ashland	719	81	--	38	--	904	456	188	22	--	13
Barron	126	7	--	36	4	152	39	639	176	--	6
Bayfield	2,516	27	--	33	--	396	188	657	57	--	4
Burnett	165	--	--	7	--	28	14	178	68	--	1
Douglas	840	8	--	14	--	65	66	375	24	--	1
Iron	1,010	175	--	54	--	1,116	402	195	2	--	24
Polk	13	1	--	15	--	46	19	519	153	--	2
Price	1,214	194	--	174	14	1,380	1,013	377	33	--	40
Rusk	598	49	--	77	--	566	419	926	115	8	18
Sawyer	1,134	127	--	247	10	1,189	504	1,086	150	--	22
Taylor	412	88	--	274	8	832	893	281	45	11	6
Washburn	534	6	--	34	--	158	140	639	91	--	13
Total	9,281	763	--	1,003	36	6,832	4,153	6,060	936	19	150
Central Unit											
Adams	3	--	--	--	--	4	3	149	37	--	--
Chippewa	249	23	--	18	--	225	241	804	187	3	12
Clark	264	30	--	95	7	456	567	1,564	412	11	6
Eau Claire	27	--	--	6	--	18	43	502	110	--	2
Jackson	64	--	--	11	8	19	128	783	190	--	6
Juneau	26	2	--	11	9	67	62	726	285	--	7
Marathon	133	93	--	318	8	813	547	1,626	190	3	8
Marquette	29	2	--	--	--	35	22	107	81	--	--
Monroe	34	--	--	29	18	68	47	1,214	333	1	5
Portage	34	1	--	9	1	82	82	509	153	--	7
Waupaca	27	9	--	26	7	320	301	625	192	--	6
Waushara	4	--	--	6	1	32	33	209	32	2	--
Wood	48	9	--	10	--	146	143	717	194	--	--
Total	942	169	--	539	59	2,285	2,219	9,535	2,396	20	59

(Table 5 continued on next page)

(Table 5 continued)

Unit and county	Species group										
	White birch	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Other hard-woods
Southwest Unit											
Buffalo	18	--	25	27	16	29	43	1,963	379	1	16
Crawford	12	--	--	29	23	104	12	1,761	456	10	7
Dunn	8	7	--	19	1	143	78	1,265	248	--	19
Grant	2	--	3	12	2	84	14	781	203	16	9
Iowa	1	--	--	11	81	55	8	620	369	35	15
La Crosse	27	--	--	50	32	66	16	1,882	422	--	1
Lafayette	--	--	--	--	--	2	--	12	2	--	--
Pepin	12	--	8	3	1	34	70	442	75	6	16
Pierce	1	--	21	12	3	63	70	413	68	--	7
Richland	--	--	--	12	3	230	35	646	210	7	10
St. Croix	2	--	2	13	2	47	12	252	59	--	8
Sauk	1	--	--	29	11	133	74	1,047	405	2	9
Trempealeau	19	--	18	10	7	3	66	1,601	354	--	1
Vernon	18	--	--	38	27	272	27	1,942	502	--	1
Total	121	7	77	265	209	1,265	525	14,627	3,752	77	119
Southeast Unit											
Brown	2	--	2	--	1	35	60	110	42	--	--
Calumet	--	--	1	--	--	9	9	22	5	--	--
Columbia	9	2	1	4	10	8	17	426	164	2	7
Dane	--	--	1	7	1	1	6	183	161	2	11
Dodge	--	--	--	6	1	37	28	129	72	--	2
Door	14	5	18	--	--	22	16	49	8	--	1
Fond du Lac	2	--	--	1	--	26	--	114	22	--	1
Green	--	--	--	2	--	2	1	40	39	1	2
Green Lake	--	--	--	--	--	--	--	23	8	--	1
Jefferson	--	--	--	2	1	2	1	52	32	7	5
Kenosha	--	--	--	1	--	--	--	1	3	--	--
Kewaunee	2	--	--	--	--	24	58	9	--	--	--
Manitowoc	2	1	3	1	--	39	19	147	37	--	--
Outagamie	1	--	7	1	--	23	47	34	30	1	--
Ozaukee	--	--	--	--	--	--	--	1	--	--	--
Racine	--	--	--	--	--	--	--	6	3	--	--
Rock	--	--	--	1	3	1	1	79	39	2	5
Sheboygan	1	--	--	9	6	130	72	391	76	--	1
Walworth	--	--	2	1	--	1	9	55	38	--	3
Washington	--	--	--	6	1	58	7	104	67	--	1
Waukesha	--	--	--	1	--	1	--	18	10	1	--
Winnebago	--	--	2	--	--	6	12	73	37	2	--
Total	33	8	37	43	24	425	363	2,066	893	18	40
State total	20,523	2,511	133	3,769	367	24,447	12,801	36,456	8,200	134	771

Table 6.--Timber removals from sawtimber on timberland for industrial roundwood by species group, Forest Survey Unit, and county in Wisconsin, 1986

(In thousand board feet)[1/]

Unit and county	All species	Species group												
		Cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tamarack	Ash	Aspen	Balsam poplar	Basswood	Beech
Northeast Unit														
Florence	25,938	309	623	1,163	651	825	312	432	11	163	8,940	--	1,121	4
Forest	46,680	336	1,061	892	65	2,601	661	799	9	752	19,427	--	2,570	40
Langlade	25,831	191	285	281	244	1,618	470	78	1	579	9,677	--	1,293	26
Lincoln	27,209	77	366	405	377	1,272	743	133	11	670	12,034	--	934	26
Marinette	49,210	642	766	203	1,878	1,631	719	319	12	503	26,700	62	889	59
Menominee	21,000	54	--	2,491	397	387	2,689	--	--	81	3,765	--	1,678	607
Oconto	29,876	271	216	409	292	2,509	378	23	21	500	14,943	--	1,024	41
Oneida	29,200	451	777	350	996	2,671	1,496	600	39	383	12,296	--	737	3
Shawano	20,182	174	10	303	66	852	766	4	4	644	4,311	--	1,717	113
Vilas	28,146	477	339	479	1,082	1,617	1,437	242	15	169	14,180	--	522	2
Total	303,272	2,982	4,443	6,976	6,048	15,983	9,671	2,630	123	4,444	126,273	62	12,485	921
Northwest Unit														
Ashland	18,160	25	460	89	125	1,127	1,168	608	24	289	7,208	--	706	--
Barron	19,598	--	5	--	54	232	646	2	--	235	12,162	--	752	--
Bayfield	34,714	--	81	--	2,484	3,904	1,398	15	1	132	19,420	105	254	--
Burnett	11,470	--	--	--	2,001	1,125	549	3	5	70	5,873	--	114	--
Douglas	20,295	1	50	4	2,639	2,035	367	21	2	121	11,909	84	61	--
Iron	20,534	424	119	207	122	841	1,047	116	--	214	9,762	--	585	3
Polk	7,812	--	--	--	291	89	363	--	--	165	2,730	--	262	--
Price	25,972	6	439	289	189	911	748	191	17	964	9,818	--	1,286	--
Rusk	23,781	--	4	22	6	250	541	9	3	625	10,308	--	2,180	--
Sawyer	34,634	--	108	140	134	1,488	1,512	196	3	728	15,061	--	1,770	--
Taylor	19,338	--	279	283	77	1,104	548	56	4	576	7,220	--	969	--
Washburn	24,999	--	8	--	1,969	1,959	806	4	--	273	14,676	21	504	--
Total	261,307	456	1,553	1,034	10,091	15,065	9,693	1,221	59	4,392	126,147	210	9,443	3
Central Unit														
Adams	5,652	--	3	--	1,333	3,220	426	--	1	6	197	--	12	--
Chippewa	13,392	1	7	7	53	380	931	9	--	399	4,329	--	434	--
Clark	25,198	--	7	3	424	478	459	3	--	967	8,552	--	1,070	--
Eau Claire	8,492	--	--	3	493	1,316	208	4	--	95	3,016	--	86	--
Jackson	11,627	--	--	10	2,802	2,051	582	1	--	64	1,413	--	28	--
Juneau	9,896	--	--	--	1,945	1,099	275	--	--	173	1,187	--	161	--
Marathon	29,410	33	48	220	105	990	668	32	12	765	9,052	--	1,631	28
Marquette	2,210	--	--	--	158	885	280	--	--	28	47	--	8	--
Monroe	11,007	--	--	--	654	1,059	339	--	--	31	251	--	208	--
Portage	8,749	113	3	25	371	1,693	893	48	1	129	1,572	--	190	2
Waupaca	15,851	78	1	168	14	1,622	932	1	--	367	4,662	--	741	28
Waushara	6,009	--	--	1	231	3,186	543	--	--	59	241	--	156	--
Wood	11,262	--	--	1	646	941	518	4	--	223	3,778	--	301	--
Total	158,755	225	69	438	9,229	18,920	7,054	102	14	3,306	38,297	--	5,026	58

(Table 6 continued on next page)

[1/] International 1/4-inch rule.

(Table 6 continued)

Unit and county	All species	Species group												
		Cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tamarack	Ash	Aspen	Balsam poplar	Basswood	Beech
Southwest Unit														
Buffalo	15,269	--	--	--	2	158	20	3	--	148	1,713	--	447	--
Crawford	12,722	--	--	--	--	3	2	1	--	50	36	--	360	--
Dunn	14,682	--	--	--	209	2,152	1,139	--	--	371	1,035	--	706	--
Grant	6,146	--	--	--	1	4	11	--	--	29	45	--	276	--
Iowa	6,389	10	--	--	--	23	30	--	--	24	38	--	247	2
La Crosse	13,423	--	--	--	53	319	20	--	--	7	86	--	291	--
Lafayette	108	--	--	--	1	--	--	--	--	--	--	--	24	--
Pepin	4,027	1	--	--	--	22	6	11	--	53	235	--	278	--
Pierce	3,907	--	--	--	1	20	30	--	--	78	77	--	311	0
Richland	6,602	--	--	--	2	--	16	--	--	71	207	--	381	--
St. Croix	2,998	--	--	--	1	518	34	--	--	98	72	--	250	--
Sauk	9,731	2	--	--	14	233	21	--	--	189	266	--	373	--
Trempealeau	13,509	--	--	--	3	385	99	11	--	93	2,211	--	122	--
Vernon	15,114	--	--	--	1	--	3	--	--	68	124	--	442	--
Total	124,627	13	--	--	288	3,837	1,431	26	--	1,279	6,145	--	4,508	2
Southeast Unit														
Brown	1,760	--	--	31	--	14	54	--	--	159	155	--	43	27
Calumet	360	--	--	--	--	--	2	--	--	103	2	--	23	--
Columbia	4,129	--	--	--	23	753	35	--	--	54	64	--	244	1
Dane	2,014	13	--	--	1	1	2	--	--	18	28	--	63	2
Dodge	1,631	3	--	--	--	--	--	--	--	31	10	--	179	13
Door	1,764	135	3	51	0	127	272	15	10	90	326	10	42	21
Fond du Lac	922	--	--	--	--	--	--	--	--	22	--	--	47	1
Green	460	--	--	--	--	--	--	1	--	5	--	--	2	0
Green Lake	317	--	--	--	1	137	9	--	--	--	4	--	--	--
Jefferson	523	--	--	--	--	2	--	--	--	10	--	--	5	1
Kenosha	47	--	--	--	--	13	--	1	--	1	--	--	--	--
Kewaunee	710	43	--	9	1	9	54	--	--	53	25	--	27	10
Manitowoc	2,099	181	1	34	2	--	245	--	--	191	54	--	82	47
Outagamie	1,355	--	--	--	--	74	17	2	--	110	310	--	72	27
Ozaukee	17	1	--	--	--	4	--	--	--	4	--	--	1	1
Racine	59	3	--	--	--	--	--	--	--	1	--	--	--	1
Rock	686	--	--	--	--	1	--	--	--	10	--	--	2	1
Sheboygan	4,264	4	--	--	--	3	56	--	--	352	19	--	244	88
Walworth	644	--	--	--	--	55	--	--	--	7	--	--	26	1
Washington	1,589	--	--	--	--	1	--	--	--	116	--	--	206	13
Waukesha	300	--	--	--	--	79	31	--	--	27	--	--	10	--
Winnebago	769	--	--	--	--	--	--	--	--	19	7	--	54	--
Total	26,419	383	4	125	28	1,273	777	19	10	1,383	1,004	10	1,372	255
State Total	874,380	4,059	6,069	8,573	25,684	55,078	28,626	3,998	206	14,804	297,866	282	32,834	1,239

(Table 6 continued on next page)

(Table 6 continued)

Unit and county	Species group										
	White birch	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Other hard-woods
Northeast Unit											
Florence	885	1,687	--	211	--	7,104	863	573	18	--	43
Forest	1,239	871	22	1,591	4	10,438	2,413	576	47	--	266
Langlade	767	306	--	210	28	6,759	1,700	1,061	80	--	177
Lincoln	596	280	--	676	30	4,589	2,755	1,084	68	--	83
Marinette	1,949	326	4	471	2	3,704	2,108	5,964	252	--	47
Menominee	50	797	--	240	10	6,117	345	1,228	25	--	39
Oconto	904	110	61	2,067	47	2,298	1,429	2,206	98	--	29
Oneida	1,474	382	--	190	10	4,076	1,391	782	56	--	40
Shawano	249	145	--	295	51	4,364	1,848	3,753	372	--	141
Vilas	1,398	379	--	173	--	3,685	920	958	47	--	25
Total	9,511	5,283	87	6,124	182	53,134	15,772	18,185	1,063	--	890
Northwest Unit											
Ashland	623	272	--	138	--	3,314	1,028	865	69	--	22
Barron	289	26	--	176	8	831	152	3190	818	--	20
Bayfield	2,202	48	--	77	--	1,079	369	2,894	238	--	13
Burnett	285	2	--	29	1	132	43	886	348	--	4
Douglas	587	14	--	37	--	213	146	1,884	116	--	4
Iron	821	404	--	150	--	3,908	957	800	11	--	43
Polk	64	3	--	76	1	246	89	2,643	780	--	10
Price	1,120	584	--	440	22	4,812	2,442	1,481	142	--	71
Rusk	610	160	--	303	1	2,391	1,344	4,404	530	36	54
Sawyer	1,290	345	--	539	15	4,239	1,238	5,056	711	--	61
Taylor	452	258	--	552	36	2,983	2,305	1,338	225	54	19
Washburn	742	14	--	80	1	522	301	2,681	411	--	27
Total	9,085	2,130	--	2,597	85	24,670	10,414	28,122	4,399	90	348
Central Unit											
Adams	2	--	--	1	--	15	8	339	88	--	1
Chippewa	135	74	--	66	--	802	831	3,954	907	18	55
Clark	228	109	--	246	34	1,925	1,617	7,251	1,759	54	12
Eau Claire	37	--	--	15	--	71	124	2,483	535	--	6
Jackson	44	--	--	37	35	71	274	3,430	775	--	10
Juneau	24	10	--	55	41	328	255	3,146	1,165	--	32
Marathon	223	321	--	602	37	3,724	1,930	8,031	908	18	32
Marquette	15	3	--	1	--	101	55	385	243	--	1
Monroe	82	2	--	135	84	340	190	5,987	1,619	3	23
Portage	26	9	--	32	4	373	343	2,289	602	--	31
Waupaca	92	39	--	93	28	1,638	1,362	3,135	821	--	29
Waushara	14	1	--	28	5	167	153	1,049	159	15	1
Wood	118	34	--	38	--	594	469	2,955	640	--	2
Total	1,040	602	--	1,349	268	10,149	7,611	44,434	10,221	108	235

(Table 6 continued on next page)

(Table 6 continued)

Unit and county	Species group										
	White birch	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Other hard-woods
Southwest Unit											
Buffalo	89	--	127	129	72	158	214	9,985	1,918	8	78
Crawford	63	--	--	144	109	558	63	8,948	2,303	49	33
Dunn	31	32	1	94	4	773	367	6,436	1,240	--	92
Grant	13	--	19	58	14	452	66	4,009	1,029	75	45
Iowa	7	--	1	57	391	294	37	3,129	1,861	168	70
La Crosse	131	--	2	239	155	361	74	9,544	2,133	2	6
Lafayette	--	--	--	--	--	10	--	62	11	--	--
Pepin	58	--	46	21	5	184	387	2,239	381	26	74
Pierce	5	--	109	62	21	331	384	2,096	349	2	31
Richland	2	--	1	62	21	1,241	169	3,286	1,062	28	53
St. Croix	15	--	13	64	10	252	61	1,277	296	--	37
Sauk	5	2	1	139	57	719	364	5,278	2,013	13	42
Trempealeau	85	--	89	47	31	16	367	8,158	1,785	2	5
Vernon	83	--	1	182	128	1,467	128	9,938	2,537	2	10
Total	587	34	410	1,298	1,018	6,816	2,681	74,385	18,918	375	576
Southeast Unit											
Brown	11	2	10	1	9	190	287	554	211	--	2
Calumet	--	--	4	1	--	44	44	110	27	--	--
Columbia	13	2	5	17	47	28	62	1,959	775	15	32
Dane	--	--	9	32	5	8	27	924	811	13	57
Dodge	--	--	1	24	5	201	137	652	361	2	12
Door	67	23	83	2	1	122	76	248	34	1	5
Fond du Lac	14	--	1	9	2	136	1	577	109	--	3
Green	--	--	--	10	2	11	4	207	197	8	13
Green Lake	2	--	1	1	1	1	1	117	37	--	5
Jefferson	--	--	--	11	3	12	5	259	164	29	22
Kenosha	--	--	--	4	--	--	2	7	16	1	2
Kewaunee	10	--	--	--	--	133	288	46	2	--	--
Manitowoc	14	4	18	5	--	210	90	737	184	--	--
Outagamie	6	2	41	5	2	119	226	177	155	9	1
Ozaukee	--	--	--	--	--	1	--	4	1	--	--
Racine	--	--	2	--	--	2	--	29	20	--	1
Rock	--	--	--	8	16	9	8	400	199	10	22
Sheboygan	9	--	2	40	27	708	348	1,970	384	2	8
Walworth	--	--	13	7	1	6	40	280	189	2	17
Washington	--	--	--	25	8	312	28	528	343	1	8
Waukesha	--	--	--	4	--	5	--	91	49	4	--
Winnebago	--	--	13	1	--	36	63	376	187	13	--
Total	146	33	203	207	129	2,294	1,737	10,252	4,455	110	210
State Total	20,369	8,082	700	11,575	1,682	97,063	38,215	175,378	39,056	683	2,259

Table 7.--Logging residue generated during industrial roundwood production by species group, Forest Survey Unit, and county, Wisconsin, 1986

(In thousand cubic feet)

Unit and county	All species	Species group												
		Cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tama-rack	Ash	Aspen	Balsam poplar	Bass-wood	Beech
Northeast Unit														
Florence	4,176	31	121	104	187	80	24	82	2	40	1,465	--	146	2
Forest	7,226	34	205	81	18	248	51	152	2	201	2,826	--	425	14
Langlade	4,231	19	53	25	64	165	34	15	--	167	1,664	--	200	4
Lincoln	4,722	8	68	48	105	139	57	24	2	167	2,193	--	145	6
Marinette	7,793	57	146	16	501	158	53	60	3	88	4,159	7	125	9
Menominee	2,490	6	--	310	117	31	202	--	--	20	470	--	204	90
Oconto	3,939	24	40	31	77	235	30	4	4	75	2,001	--	133	6
Oneida	5,076	44	145	32	271	281	132	114	7	106	2,138	--	109	--
Shawano	2,309	15	2	35	20	101	57	--	--	88	618	--	177	18
Vilas	4,818	47	62	44	273	135	108	44	4	36	2,385	--	78	1
Total	46,780	285	842	726	1,633	1,573	748	495	24	988	19,919	7	1,742	150
Northwest Unit														
Ashland	2,836	2	82	9	34	99	81	106	5	79	1,156	--	93	--
Barron	1,766	--	1	--	7	22	47	--	--	26	1,064	--	74	--
Bayfield	6,215	--	14	--	524	337	107	2	--	32	3,467	39	28	--
Burnett	1,750	--	--	--	380	80	40	--	1	10	1,000	--	14	--
Douglas	3,489	--	9	--	631	180	28	3	--	40	1,932	32	7	--
Iron	3,409	43	17	18	19	58	75	15	--	54	1,607	--	113	1
Polk	982	--	--	--	57	2	26	--	--	19	468	--	31	--
Price	4,529	--	56	28	54	86	54	35	3	286	1,651	--	191	--
Rusk	3,291	--	--	3	--	26	40	1	--	135	1,510	--	258	--
Sawyer	5,597	--	20	15	32	122	110	38	--	185	2,665	--	273	--
Taylor	3,219	--	47	35	12	104	40	9	--	145	1,299	--	133	--
Washburn	3,880	--	1	--	280	150	61	--	--	87	2,473	8	53	--
Total	40,963	45	247	108	2,030	1,266	709	209	9	1,098	20,292	79	1,268	1
Central Unit														
Adams	972	--	--	--	391	402	41	--	--	1	37	--	1	--
Chippewa	1,858	--	1	1	15	40	68	2	--	72	722	--	61	--
Clark	3,662	--	1	--	125	51	33	--	--	163	1,472	--	131	--
Eau Claire	1,143	--	--	--	144	157	17	--	--	12	454	--	11	--
Jackson	1,700	--	--	1	658	188	44	--	--	8	207	--	4	--
Juneau	1,554	--	--	--	574	136	24	--	--	23	183	--	19	--
Marathon	4,010	3	8	23	30	119	51	6	2	122	1,612	--	187	4
Marquette	310	--	--	--	47	109	28	--	--	7	7	--	--	--
Monroe	1,299	--	--	--	191	120	26	--	--	8	31	--	24	--
Portage	1,119	11	--	3	104	194	73	9	--	20	261	--	20	--
Waupaca	1,770	8	--	12	5	169	74	--	--	43	654	--	81	4
Waushara	727	--	--	--	67	391	52	--	--	7	39	--	16	--
Wood	1,722	--	--	--	189	115	46	1	--	34	696	--	35	--
Total	21,846	22	10	40	2,540	2,191	577	18	2	520	6,375	--	590	8

(Table 7 continued on next page)

(Table 7 continued)

Unit and county	All species	Species group												
		Cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tamarack	Ash	Aspen	Balsam poplar	Basswood	Beech
Southwest Unit														
Buffalo	1,495	--	--	--	--	19	2	--	--	19	144	--	52	--
Crawford	1,271	--	--	--	--	--	--	--	--	6	3	--	44	--
Dunn	1,453	--	--	--	61	189	85	--	--	45	94	--	85	--
Grant	588	--	--	--	--	--	1	--	--	4	6	--	35	--
Iowa	672	1	--	--	--	3	2	--	--	5	4	--	30	--
La Crosse	1,356	--	--	--	10	32	1	--	--	--	10	--	35	--
Lafayette	13	--	--	--	--	--	--	--	--	--	--	--	5	--
Pepin	389	--	--	--	--	1	--	2	--	6	28	--	29	--
Pierce	364	--	--	--	--	1	2	--	--	9	9	--	35	--
Richland	652	--	--	--	--	--	1	--	--	10	24	--	40	--
St. Croix	291	--	--	--	--	38	2	--	--	11	8	--	30	--
Sauk	1,000	--	--	--	4	29	1	--	--	22	31	--	40	--
Trempealeau	1,198	--	--	--	1	49	8	2	--	11	115	--	8	--
Vernon	1,454	--	--	--	--	--	--	--	--	8	15	--	52	--
Total	12,196	1	--	--	76	361	105	4	--	156	491	--	520	--
Southeast Unit														
Brown	194	--	--	2	--	1	4	--	--	19	24	--	5	4
Calumet	38	--	--	--	--	--	--	--	--	12	--	--	3	--
Columbia	480	--	--	--	7	94	4	--	--	8	8	--	24	--
Dane	202	1	--	--	--	--	--	--	--	2	2	--	2	--
Dodge	172	--	--	--	--	--	--	--	--	4	1	--	21	1
Door	194	15	--	4	--	9	20	1	1	11	54	1	5	2
Fond du Lac	93	--	--	--	--	--	--	--	--	3	--	--	5	--
Green	43	--	--	--	--	--	--	--	--	--	--	--	--	--
Green Lake	34	--	--	--	--	18	1	--	--	--	--	--	--	--
Jefferson	53	--	--	--	--	--	--	--	--	1	--	--	--	--
Kenosha	2	--	--	--	--	1	--	--	--	--	--	--	--	--
Kewaunee	71	5	--	--	--	1	4	--	--	6	3	--	4	1
Manitowoc	212	18	--	2	--	--	18	--	--	23	7	--	10	5
Outagamie	148	--	--	--	--	8	1	--	--	13	51	--	7	4
Ozaukee	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Racine	5	--	--	--	--	--	--	--	--	--	--	--	--	--
Rock	68	--	--	--	--	--	--	--	--	1	--	--	--	--
Sheboygan	445	--	--	--	--	--	4	--	--	43	2	--	30	11
Walworth	65	--	--	--	--	6	--	--	--	--	--	--	4	--
Washington	163	--	--	--	--	--	--	--	--	14	--	--	24	1
Waukesha	32	--	--	--	--	9	4	--	--	4	--	--	1	--
Winnebago	71	--	--	--	--	--	--	--	--	2	--	--	5	--
Total	2,785	39	--	8	7	147	60	1	1	166	152	1	150	29
State total	124,570	392	1,099	882	6,286	5,538	2,199	727	36	2,928	47,229	87	4,270	188

(Table 7 continued on next page)

(Table 7 continued)

Unit and county	Species group										
	White birch	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Other hard-woods
Northeast Unit											
Florence	503	229	--	47	--	856	164	79	2	--	12
Forest	526	191	3	308	--	1,339	450	66	5	--	81
Langlade	354	72	--	46	4	897	292	95	8	--	53
Lincoln	248	49	--	210	4	608	499	109	7	--	26
Marinette	816	50	--	76	--	378	342	706	30	--	13
Menominee	24	114	--	78	1	604	74	130	3	--	12
Oconto	291	18	6	262	5	219	200	264	9	--	5
Oneida	751	74	--	29	1	485	251	90	5	--	11
Shawano	58	19	--	60	6	390	226	357	38	--	24
Vilas	746	73	--	25	--	438	156	149	7	--	7
Total	4,317	889	9	1,141	21	6,214	2,654	2,045	114	--	244
Northwest Unit											
Ashland	305	48	--	20	--	392	211	96	11	--	7
Barron	59	--	--	13	3	45	20	291	90	--	4
Bayfield	1,063	10	--	12	--	140	71	338	29	--	2
Burnett	76	--	--	4	--	13	7	91	34	--	--
Douglas	351	5	--	8	--	29	30	193	11	--	--
Iron	427	106	--	33	--	519	189	100	1	--	14
Polk	7	--	--	8	--	23	10	251	79	--	1
Price	506	118	--	104	9	640	474	194	16	--	24
Rusk	257	31	--	43	--	265	202	447	59	4	10
Sawyer	493	72	--	150	6	552	236	537	77	--	14
Taylor	180	54	--	167	4	386	427	145	23	6	3
Washburn	236	3	--	20	--	72	62	320	47	--	7
Total	3,960	447	--	582	22	3,076	1,939	3,003	477	10	86
Central Unit											
Adams	2	--	--	--	--	2	1	75	19	--	--
Chippewa	102	14	--	11	--	105	126	412	96	2	8
Clark	112	17	--	58	4	212	275	787	212	6	3
Eau Claire	10	--	--	3	--	9	21	248	56	--	1
Jackson	26	--	--	6	4	9	57	389	96	--	3
Juneau	11	1	--	6	5	32	34	374	128	--	4
Marathon	60	50	--	195	4	373	277	781	96	2	5
Marquette	12	1	--	--	--	15	9	54	21	--	--
Monroe	18	--	--	17	10	32	25	622	172	--	3
Portage	14	--	--	4	--	37	43	244	78	--	4
Waupaca	15	4	--	15	4	147	167	301	63	--	4
Waushara	2	--	--	4	--	13	17	103	16	--	--
Wood	24	5	--	5	--	65	72	336	99	--	--
Total	408	92	--	324	31	1,051	1,124	4,726	1,152	10	35

(Table 7 continued on next page)

(Table 7 continued)

Unit and county	Species group										
	White birch	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Other hard-woods
Southwest Unit											
Buffalo	8	--	10	15	10	14	26	974	193	--	9
Crawford	7	--	--	16	13	51	7	881	233	6	4
Dunn	4	4	--	11	--	67	44	628	125	--	11
Grant	1	--	2	7	1	41	8	366	101	10	5
Iowa	--	--	--	7	46	27	4	321	191	21	10
La Crosse	15	--	--	28	19	32	10	948	216	--	--
Lafayette	--	--	--	--	--	1	--	6	1	--	--
Pepin	7	--	2	2	--	17	18	224	39	4	10
Pierce	--	--	7	7	2	30	18	206	34	--	4
Richland	--	--	--	7	2	112	21	319	106	4	6
St. Croix	1	--	1	8	1	23	7	127	30	--	4
Sauk	--	--	--	16	7	61	41	541	201	1	5
Trempealeau	6	--	11	5	4	1	16	781	180	--	--
Vernon	10	--	--	22	15	131	15	929	256	--	1
Total	59	4	33	151	120	608	235	7,251	1,906	46	69
Southeast Unit											
Brown	1	--	1	--	1	18	34	58	22	--	--
Calumet	--	--	--	--	--	4	5	11	3	--	--
Columbia	4	1	--	2	5	3	9	220	86	1	4
Dane	--	--	1	4	--	--	4	95	83	1	7
Dodge	--	--	--	5	--	18	16	67	38	--	1
Door	8	3	10	--	--	11	9	25	5	--	--
Fond du Lac	1	--	--	1	--	13	--	59	11	--	--
Green	--	--	--	1	--	1	--	20	20	--	1
Green Lake	--	--	--	--	--	--	--	11	4	--	--
Jefferson	--	--	--	1	--	1	--	26	17	4	3
Kenosha	--	--	--	--	--	--	--	--	1	--	--
Kewaunee	1	--	--	--	--	9	32	5	--	--	--
Manitowoc	1	--	2	--	--	20	11	77	18	--	--
Outagamie	--	--	1	--	--	9	23	15	16	--	--
Ozaukee	--	--	--	--	--	--	--	--	--	--	--
Racine	--	--	--	--	--	--	--	4	1	--	--
Rock	--	--	--	--	1	1	--	41	20	1	3
Sheboygan	1	--	--	5	4	63	41	202	39	--	--
Walworth	--	--	1	--	--	--	5	28	19	--	2
Washington	--	--	--	4	--	28	4	54	34	--	--
Waukesha	--	--	--	--	--	--	--	9	5	--	--
Winnebago	--	--	1	--	--	1	7	36	19	--	--
Total	17	4	17	23	11	200	200	1063	461	7	21
State total	8,761	1,436	59	2,221	205	11,149	6,152	18,088	4,110	73	455

Table 8.--Wisconsin pulpwood production by species group, 1946-1986

(In thousand standard cords, unpeeled)[1/]

Year	Total	Roundwood								Residue	
		Pine	Balsam fir	Hemlock	Spruce	Tamarack	Aspen	Birch	Other hardwoods	Soft-woods	Hard-woods
1946	428	75	48	64	32	3	202	4	[2/]	[2/]	[2/]
1947	493	157	53	50	31	6	187	8	[2/]	[2/]	1
1948	468	117	87	51	34	3	167	8	[2/]	[2/]	1
1949	427	72	78	47	33	1	184	10	--	[2/]	2
1950	468	93	69	47	31	[2/]	195	6	20	1	6
1951	565	102	55	51	30	1	281	28	17	--	--
1952	582	95	76	66	39	1	275	15	15	--	--
1953	553	71	45	51	26	1	306	12	41	--	--
1954	691	113	56	63	31	4	348	27	49	--	--
1955	710	121	48	58	23	4	365	16	75	--	--
1956	960	140	45	56	23	4	507	21	164	--	--
1957	934	126	60	57	27	6	453	27	178	--	--
1958	828	148	62	55	23	6	369	18	147	--	--
1959	972	186	52	49	21	6	431	26	159	5	37
1960	1,052	124	50	52	18	6	540	27	204	4	27
1961	1,078	154	61	47	23	7	530	34	201	3	18
1962	1,140	188	46	42	15	6	572	41	188	6	36
1963	1,302	170	60	52	19	6	613	50	233	13	86
1964	1,244	168	57	52	20	5	603	41	222	11	65
1965	1,253	207	50	60	15	4	607	24	197	14	75
1966	1,536	215	55	69	17	3	810	39	243	12	73
1967	1,417	174	48	42	13	3	739	84	203	10	101
1968	1,298	199	51	44	11	5	629	57	185	16	101
1969	1,450	216	50	51	13	2	697	62	238	15	106
1970	1,656	259	68	53	16	4	771	76	296	19	94
1971	1,552	268	54	42	12	3	736	51	269	16	101
1972	1,538	246	49	42	13	3	685	47	333	10	110
1973	1,758	232	67	32	16	1	761	73	400	21	155
1974	2,053	291	85	45	19	2[3/]	797	102	506	26	180
1975	1,505	240	98	45	25	4[3/]	588	83	244	36	142
1976	1,840	286	89	43	19	3[3/]	694	114	425	38	129
1977	1,816	297	73	43	19	5[3/]	696	103	383	48	149
1978	1,895	358	75	52	20	4[3/]	669	121	373	40	183
1979[4/]	2,109	361	84	40	19	2[3/]	751	151	441	49	211
1980[4/]	2,362	388	101	34	32	4[3/]	873	185	456	40	249
1981[4/]	2,389	419	105	29	27	5	965	159	389	47	244
1982[4/]	2,285	494	103	33	28	7	884	154	339	42	201
1983[4/]	2,475	412	85	40	28	6	1,025	198	422	48	211
1984[4/]	2,644	483	84	25	42	4	1,067	208	439	47	248
1985[4/]	2,588	452	72	37	36	2	1,073	193	431	51	241
1986[4/]	2,926	500	46	37	30	2	1,208	283	528	52	240

[1/] 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

[2/] Less than 500 cords.

[3/] Includes cedar.

[4/] Includes logs, bolts, and wood residue used in manufacturing particleboard and waferboard.

Table 9.--Wisconsin pulpwood production by species group and destination, 1986

(In thousand standard cords, unpeeled)[1/]

Species group	Total	Destination of wood		
		Wisconsin	Michigan	Minnesota
Roundwood[2/]				
Pine	500	486	1	13
Balsam fir	46	45	1	[3/]
Hemlock	37	36	1	--
Spruce	30	30	[3/]	--
Tamarack	2	2	--	--
Aspen	1,208	1,161	14	33
Birch	283	221	62	--
Other hardwoods	528	448	77	3
Total	2,634	2,429	156	49
Residue				
Softwoods	52	44	1	7
Hardwoods	240	220	20	--
Total	292	264	21	7
All material	2,926	2,693	177	56

[1/] 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

[2/] Includes chips from roundwood.

[3/] Less than 500 cords.

Table 10.--Pulpwood production from roundwood by species group, Forest Survey Unit, and county, Wisconsin, 1986

(In standard cords, unpeeled)[1/]

Unit and county	All species	Species group											
		Cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tamarack	Ash	Aspen	Balsam poplar	Basswood	Beech
Northeast Unit														
Florence	105,086	--	5,208	2,746	8,047	2,986	197	3,470	98	953	35,860	--	1,530	56
Forest	156,555	--	8,936	2,315	832	8,505	205	6,479	80	5,402	47,583	--	5,769	466
Langlade	107,879	--	2,225	703	2,534	6,910	81	652	13	4,665	43,255	--	2,725	60
Lincoln	128,284	--	2,775	2,677	4,536	6,470	435	993	97	4,188	63,163	--	1,731	21
Marinette	180,627	--	6,248	261	20,662	5,660	265	2,433	103	1,383	97,374	--	1,114	50
Menominee	51,233	--	--	18,227	5,092	1,864	790	--	--	509	11,820	--	76	799
Oconto	68,391	--	1,647	205	3,125	8,855	290	205	188	732	36,498	--	907	61
Oneida	139,426	--	6,032	741	11,274	12,285	3,296	4,939	333	2,893	56,208	--	1,026	9
Shawano	31,211	--	80	1,670	849	5,574	244	32	32	803	13,776	--	169	243
Vilas	132,820	--	2,489	1,121	10,862	3,274	1,335	1,845	132	852	69,157	--	972	21
Total	1,101,512	--	35,640	30,666	67,813	62,383	7,138	21,048	1,076	22,380	474,694	--	16,019	1,786
Northwest Unit														
Ashland	74,128	--	3,215	471	1,483	2,871	89	4,345	213	2,163	32,216	--	417	--
Barron	18,302	--	39	--	254	786	26	11	--	186	14,384	--	58	--
Bayfield	186,504	--	456	--	18,167	7,358	760	72	--	1,023	113,130	1,298	462	--
Burnett	46,068	--	--	--	11,843	1,699	20	24	46	--	30,490	--	3	--
Douglas	118,152	--	339	34	24,319	6,317	46	139	20	1,157	71,164	1,038	--	--
Iron	83,841	--	472	214	778	366	178	396	--	1,380	42,547	--	1,996	35
Polk	14,100	--	--	--	2,040	--	--	--	--	6	11,867	--	121	--
Price	113,661	--	2,063	1,386	2,334	3,110	85	1,405	147	8,078	41,824	--	1,777	--
Rusk	53,579	--	6	165	--	1,243	--	60	24	2,974	30,048	--	906	--
Sawyer	129,931	--	853	533	1,202	2,009	64	1,637	25	4,675	73,452	--	3,985	--
Taylor	81,861	--	1,965	2,053	299	3,365	--	374	32	3,787	37,973	--	1,186	3
Washburn	96,736	--	54	--	8,319	3,012	572	24	--	2,563	67,793	260	96	--
Total	1,016,863	--	9,462	4,856	71,038	32,136	1,840	8,487	507	27,992	566,888	2,596	11,007	38
Central Unit														
Adams	46,577	--	26	--	16,974	24,003	1,467	--	8	22	1,122	--	13	--
Chippewa	30,703	--	57	54	686	1,982	185	77	--	1,175	17,291	--	394	--
Clark	68,686	--	60	20	5,389	2,294	--	28	--	2,169	39,626	--	95	3
Eau Claire	29,252	--	--	23	6,204	8,516	190	32	--	40	12,663	--	48	--
Jackson	43,905	--	--	73	24,810	5,634	419	13	--	42	5,751	--	--	--
Juneau	42,058	--	--	--	24,971	8,088	669	--	--	70	3,482	--	--	--
Marathon	72,981	--	344	941	1,326	6,643	253	273	108	1,433	44,955	--	205	17
Marquette	12,746	--	--	--	2,023	6,437	1,195	--	--	208	250	--	--	--
Monroe	17,031	--	--	--	8,276	6,294	278	--	--	92	214	--	--	--
Portage	26,756	--	25	186	4,381	10,090	1,259	416	10	228	6,317	--	3	--
Waupaca	19,562	--	13	112	177	7,346	718	13	--	81	9,170	--	84	3
Waushara	28,620	--	--	10	2,969	22,564	1,979	--	--	3	918	--	--	--
Wood	44,785	--	--	10	8,259	6,496	1,092	38	--	345	20,641	--	9	6
Total	483,662	--	525	1,429	106,445	116,387	9,704	890	126	5,908	162,400	--	851	29

(Table 10 continued on next page)

[1/] 128 cubic feet, consisting of 79 cubic of wood and 49 cubic feet of bark and air space.

(Table 10 continued)

Unit and county	All species	Species group												
		Cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tamarack	Ash	Aspen	Balsam poplar	Basswood	Beech
Southwest Unit														
Buffalo	1,317	--	--	--	30	1,166	46	24	--	2	--	--	--	--
Crawford	41	--	--	--	--	17	--	5	--	--	19	--	--	--
Dunn	8,168	--	--	--	2,681	4,742	131	--	--	10	499	--	1	--
Grant	6	--	--	--	--	--	6	--	--	--	--	--	--	--
Iowa	175	--	--	--	--	158	6	--	--	--	11	--	--	--
La Crosse	1,694	--	--	--	252	1,318	114	--	--	--	--	--	--	--
Lafayette	15	--	--	--	15	--	--	--	--	--	--	--	--	--
Pepin	174	--	--	--	--	36	--	93	--	--	45	--	--	--
Pierce	120	--	--	--	16	14	--	--	--	2	57	--	--	--
Richland	24	--	--	--	24	--	--	--	--	--	--	--	--	--
St. Croix	265	--	--	--	14	196	36	--	--	--	19	--	--	--
Sauk	2,008	--	--	--	170	1,733	105	--	--	--	--	--	--	--
Trempealeau	3,431	--	--	--	35	2,893	99	96	--	--	156	--	--	--
Vernon	6	--	--	--	--	--	--	--	--	--	6	--	--	--
Total	17,444	--	--	--	3,237	12,273	543	218	--	14	812	--	1	--
Southeast Unit														
Brown	622	--	--	--	--	100	--	--	--	--	522	--	--	--
Calumet	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Columbia	8,020	--	--	--	296	5,637	235	--	--	52	75	--	--	--
Dane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dodge	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Door	1,380	--	--	--	--	--	--	--	--	--	1,380	--	--	--
Fond du Lac	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Green	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Green Lake	1,109	--	--	--	13	1,024	72	--	--	--	--	--	--	--
Jefferson	13	--	--	--	--	13	--	--	--	--	--	--	--	--
Kenosha	97	--	--	--	--	97	--	--	--	--	--	--	--	--
Kewaunee	138	--	--	10	13	49	--	--	--	--	66	--	--	--
Manitowoc	17	--	7	10	--	--	--	--	--	--	--	--	--	--
Outagamie	2,112	--	--	--	--	503	28	16	--	7	1,497	--	--	9
Ozaukee	29	--	--	--	--	29	--	--	--	--	--	--	--	--
Racine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rock	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sheboygan	52	--	--	--	--	25	27	--	--	--	--	--	--	--
Walworth	413	--	--	--	--	413	--	--	--	--	--	--	--	--
Washington	11	--	--	--	--	11	--	--	--	--	--	--	--	--
Waukesha	829	--	--	--	--	598	231	--	--	--	--	--	--	--
Winnebago	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	14,842	--	7	20	322	8,499	593	16	--	59	3,540	--	--	9
State total	2,634,323	--	45,634	36,971	248,855	231,678	19,818	30,659	1,709	56,353	1,208,334	2,596	27,878	1,862

(Table 10 continued on next page)

(Table 10 continued)

Unit and county	Species group										
	White birch	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Other hard-woods
Northeast Unit											
Florence	16,041	2,548	--	1,013	--	17,893	4,500	1,512	42	--	386
Forest	15,212	4,458	--	5,625	--	29,716	12,054	595	6	--	2,317
Langlade	10,524	1,814	--	1,024	--	21,491	7,433	186	27	--	1,557
Lincoln	7,075	793	--	6,204	--	14,058	12,322	58	--	--	688
Marinette	23,557	969	--	966	--	5,680	6,779	6,597	132	--	394
Menominee	843	922	--	2,306	--	4,663	2,550	388	25	--	359
Oconto	7,388	240	--	631	--	1,859	2,819	2,646	7	--	88
Oneida	23,166	1,418	--	264	--	8,462	6,182	550	--	--	348
Shawano	1,461	138	--	1,043	--	2,233	1,515	866	60	--	423
Vilas	23,503	1,310	--	401	--	8,781	3,686	2,779	114	--	186
Total	128,770	14,610	--	19,477	--	114,836	59,840	16,177	413	--	6,746
Northwest Unit											
Ashland	9,302	760	--	305	--	8,930	6,452	457	208	--	231
Barron	1,045	--	--	114	93	103	145	617	376	--	65
Bayfield	32,565	445	--	380	--	5,061	2,764	2,285	245	--	33
Burnett	1,669	--	--	--	--	104	118	52	--	--	--
Douglas	11,336	163	--	222	--	788	986	61	23	--	--
Iron	13,247	2,785	--	692	--	11,882	5,381	1,028	--	--	464
Polk	18	--	--	--	--	3	7	27	10	--	1
Price	15,211	2,184	--	2,495	279	14,775	13,353	2,297	102	--	756
Rusk	7,452	495	--	433	--	3,726	3,786	1,798	276	--	187
Sawyer	13,663	1,735	--	4,104	186	12,231	6,557	2,537	212	--	271
Taylor	5,022	1,046	--	4,843	--	8,478	10,921	444	--	--	70
Washburn	5,999	94	--	517	--	1,866	2,036	3,059	237	--	235
Total	116,529	9,707	--	14,105	558	67,947	52,506	14,662	1,689	--	2,313
Central Unit											
Adams	43	--	--	--	--	31	48	2,263	557	--	--
Chippewa	3,495	233	--	105	--	2,331	1,808	584	195	--	51
Clark	3,425	222	--	1,327	--	2,930	6,054	3,142	1,775	--	127
Eau Claire	317	--	--	69	--	136	493	385	103	--	33
Jackson	892	--	--	78	--	201	1,857	2,995	1,027	--	113
Juneau	344	--	--	17	--	174	259	2,816	1,151	--	17
Marathon	1,364	853	--	5,807	--	3,627	3,785	752	251	--	44
Marquette	417	42	--	--	--	507	313	833	521	--	--
Monroe	254	--	--	51	--	134	232	807	369	--	30
Portage	459	--	--	24	--	373	300	1,737	947	--	1
Waupaca	135	6	--	215	--	490	489	370	135	--	5
Waushara	28	--	--	11	--	25	26	56	31	--	--
Wood	379	37	--	44	--	1,035	1,138	3,396	1,852	--	8
Total	11,552	1,393	--	7,748	--	11,994	16,802	20,136	8,914	--	429

(Table 10 continued on next page)

(Table 10 continued)

Unit and county	Species group										
	White birch	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Other hard-woods
Southwest Unit											
Buffalo	18	--	--	6	--	2	5	9	--	--	9
Crawford	--	--	--	--	--	--	--	--	--	--	--
Dunn	9	1	--	1	--	11	18	40	22	--	2
Grant	--	--	--	--	--	--	--	--	--	--	--
Iowa	--	--	--	--	--	--	--	--	--	--	--
La Crosse	--	--	--	1	--	--	3	6	--	--	--
Lafayette	--	--	--	--	--	--	--	--	--	--	--
Pepin	--	--	--	--	--	--	--	--	--	--	--
Pierce	--	--	--	3	--	20	--	8	--	--	--
Richland	--	--	--	--	--	--	--	--	--	--	--
St. Croix	--	--	--	--	--	--	--	--	--	--	--
Sauk	--	--	--	--	--	--	--	--	--	--	--
Trempealeau	35	--	--	2	--	--	10	58	42	--	5
Vernon	--	--	--	--	--	--	--	--	--	--	--
Total	62	1	--	13	--	33	36	121	64	--	16
Southeast Unit											
Brown	--	--	--	--	--	--	--	--	--	--	--
Calumet	--	--	--	--	--	--	--	--	--	--	--
Columbia	104	31	--	21	--	109	105	1,042	313	--	--
Dane	--	--	--	--	--	--	--	--	--	--	--
Dodge	--	--	--	--	--	--	--	--	--	--	--
Door	--	--	--	--	--	--	--	--	--	--	--
Fond du Lac	--	--	--	--	--	--	--	--	--	--	--
Green	--	--	--	--	--	--	--	--	--	--	--
Green Lake	--	--	--	--	--	--	--	--	--	--	--
Jefferson	--	--	--	--	--	--	--	--	--	--	--
Kenosha	--	--	--	--	--	--	--	--	--	--	--
Kewaunee	--	--	--	--	--	--	--	--	--	--	--
Manitowoc	--	--	--	--	--	--	--	--	--	--	--
Outagamie	5	--	--	9	--	18	20	--	--	--	--
Ozaukee	--	--	--	--	--	--	--	--	--	--	--
Racine	--	--	--	--	--	--	--	--	--	--	--
Rock	--	--	--	--	--	--	--	--	--	--	--
Sheboygan	--	--	--	--	--	--	--	--	--	--	--
Walworth	--	--	--	--	--	--	--	--	--	--	---
Washington	--	--	--	--	--	--	--	--	--	--	--
Waukesha	--	--	--	--	--	--	--	--	--	--	--
Winnebago	--	--	--	--	--	--	--	--	--	--	--
Total	109	31	--	30	--	127	125	1,042	313	--	--
State total	257,022	25,742	--	41,373	558	194,937	129,309	52,138	11,393	--	9,504

Table 11.--Pulpwood receipts in Wisconsin by species group, 1946-1986

(In thousand standard cords, unpeeled)[1/]

Year	Total	Roundwood								Residue	
		Pine	Balsam fir	Hemlock	Spruce	Tamarack	Aspen	Birch	Other hardwoods	Soft-woods	Hard-woods
1946	1,902	298	280	233	645	16	416	14	[2/]	[2/]	[2/]
1947	1,722	292	230	134	687	19	346	13	[2/]	[2/]	1
1948	1,741	307	279	136	663	5	333	17	[2/]	[2/]	1
1949	1,426	227	244	101	502	3	332	15	[2/]	[2/]	2
1950	1,442	244	238	91	441	3	387	10	21	1	6
1951	2,097	428	232	120	678	10	569	42	18	--	--
1952	2,059	365	288	131	732	6	490	32	15	--	--
1953	1,689	283	179	76	529	2	552	26	42	--	--
1954	1,919	298	228	125	608	5	566	40	49	--	--
1955	1,777	319	199	92	471	5	590	26	75	--	--
1956	2,136	397	195	143	445	9	754	27	166	--	--
1957	2,247	325	254	116	578	14	739	38	183	--	--
1958	1,866	318	200	90	479	18	583	19	159	--	--
1959	1,881	436	169	87	345	17	619	30	165	7	6
1960	2,114	388	176	97	389	26	785	31	208	7	7
1961	1,972	330	177	92	350	19	741	44	196	12	11
1962	2,124	395	155	99	317	19	784	49	206	51	49
1963	2,429	414	175	114	341	22	877	64	235	96	91
1964	2,271	350	139	110	314	20	855	62	233	96	92
1965	2,290	410	114	120	300	19	899	26	219	91	92
1966	2,701	473	139	162	301	11	1,112	44	270	100	89
1967	2,729	415	140	100	308	42	1,115	91	259	135	124
1968	2,226	405	100	86	200	33	860	59	205	160	118
1969	2,514	456	81	112	208	25	978	63	278	192	121
1970	2,821	498	111	118	208	43	1,088	81	333	189	152
1971	2,581	514	88	83	167	37	1,011	53	295	193	140
1972	2,450	443	82	69	181	31	902	48	354	198	142
1973	2,696	387	103	54	224	28	1,006	68	398	279	149
1974	3,135	508	133	69	161	36	1,109	115	558	257	189
1975	2,344	391	155	73	146	30	791	89	288	216	165
1976	2,713	437	137	66	121	34	926	133	486	256	117
1977	2,596	416	109	43	94	31	915	120	445	299	124
1978	2,676	491	99	50	82	25	888	145	450	301	145
1979[3/]	3,067	567	115	39	76	21	999	178	548	332	192
1980[3/]	3,266	518	147	40	94	34	1,118	231	562	268	254
1981[3/]	3,154	512	135	31	86	31	1,182	189	477	252	259
1982[3/]	2,978	565	131	36	79	37	1,092	173	434	209	222
1983[3/]	3,114	470	114	43	65	27	1,220	217	502	222	234
1984[3/]	3,301	540	108	26	95	15	1,269	228	552	204	264
1985[3/]	3,104	500	97	39	80	4	1,250	202	494	198	240
1986[3/]	3,270	543	59	40	63	4	1,370	240	518	192	241

[1/] 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

[2/] Less than 500 cords.

[3/] Includes logs and bolts used in manufacturing particleboard and waferboard.

Table 12.--Pulpwood receipts in Wisconsin by species group and area of origin, 1986

(In thousand standard cords, unpeeled)[1/]

Species group	Total	Area of origin				
		Wisconsin	Michigan	Minnesota	Other States	Canada
Roundwood[2/]						
Pine	543	486	48	8	1	--
Balsam fir	59	44	14	1	--	--
Hemlock	40	37	3	--	--	--
Spruce	63	30	16	17	--	--
Tamarack	4	2	[3/]	2	--	--
Aspen	1,370	1,161	183	26	[3/]	--
Birch	240	221	10	9	--	--
Other hardwoods	518	448	70	[3/]	--	--
Total	2,837	2,429	344	63	1	--
Residue						
Softwoods	192	44	5	6	114	23
Hardwoods	241	220	19	[3/]	2	--
Total	433	264	24	6	116	23
All material	3,270	2,693	368	69	117	23

[1/] 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

[2/] Includes chips from roundwood.

[3/] Less than 500 cords.

Table 13.--Saw log production and receipts in Wisconsin by species group, 1981 and 1986

(In thousand board feet)[1/]

Species group	Production			Receipts		
	1981	1986	Change	1981	1986	Change
Softwoods						
Cedar	2,045	4,107	2,062	3,047	6,411	3,364
Balsam fir	5,150	766	-4,384	7,154	948	-6,206
Hemlock	8,913	3,730	-5,183	9,638	4,759	-4,879
Jack pine	5,043	5,805	762	6,921	2,813	-4,108
Red pine	14,669	23,213	8,544	16,544	20,612	4,068
White pine	36,628	26,487	-10,141	41,263	27,902	-13,361
Spruce	3,147	434	-2,713	4,368	725	-3,643
Tamarack	88	12	-76	183	11	-172
Total	75,683	64,554	-11,129	89,118	64,181	-24,937
Hardwoods						
Ash	11,860	11,811	-49	12,116	12,710	594
Aspen	76,407	79,054	2,647	88,708	84,622	-4,086
Balsam poplar	954	85	-869	965	150	-815
Basswood	28,039	33,150	5,111	29,275	36,217	6,942
Beech	2,702	1,296	-1,406	2,766	1,298	-1,468
White birch	9,186	13,287	4,101	10,579	13,960	3,381
Yellow birch	4,658	6,237	1,579	5,443	7,154	1,711
Cottonwood	1,378	555	-823	1,383	767	-616
Elm	42,840	9,630	-33,210	45,962	9,942	-36,020
Hickory	2,105	1,951	-154	2,318	2,048	-270
Hard maple	46,753	59,798	13,045	53,608	67,311	13,703
Soft maple	18,607	23,849	5,242	18,772	24,684	5,912
Red oak	132,565	164,112	31,547	139,242	167,160	27,918
White oak	34,490	38,224	3,734	35,932	39,019	3,087
Walnut	753	769	16	823	917	94
Other hardwoods	1,795	1,737	-58	1,852	1,793	-59
Total	415,092	445,545	30,453	449,744	469,752	20,008
All species	490,775	510,099	19,324	538,862	533,933	-4,929

[1/] International 1/4-inch rule.

Table 14.--Saw log production by Forest Survey Unit, species group, and State of destination, Wisconsin, 1986

(In thousand board feet)[1/]

Species group	All states	State of destination		
		Wisconsin	Michigan	Minnesota
ALL UNITS				
Softwoods				
Cedar	4,107	4,107	--	--
Balsam fir	766	766	--	--
Hemlock	3,730	3,712	18	--
Jack pine	5,805	2,499	--	3,306
Red pine	23,213	19,153	110	3,950
White pine	26,487	26,182	2	303
Spruce	434	409	25	--
Tamarack	12	11	1	--
Total	64,554	56,839	156	7,559
Hardwoods				
Ash	11,811	11,756	40	15
Aspen	79,054	78,746	200	108
Balsam poplar	85	85	--	--
Basswood	33,150	32,927	203	20
Beech	1,296	1,296	--	--
White birch	13,287	13,180	107	--
Yellow birch	6,237	6,082	155	--
Cottonwood	555	555	--	--
Elm	9,630	9,519	57	54
Hickory	1,951	1,941	--	10
Hard maple	59,798	59,032	746	20
Soft maple	23,849	23,648	181	20
Red oak	164,112	161,567	1,664	881
White oak	38,224	37,723	15	486
Walnut	769	769	--	--
Other hardwoods	1,737	1,719	18	--
Total	445,545	440,545	3,386	1,614
All species	510,099	497,384	3,542	9,173
NORTHEAST UNIT				
Softwoods				
Cedar	2,920	2,920	--	--
Balsam fir	377	377	--	--
Hemlock	2,993	2,993	--	--
Jack pine	835	835	--	--
Red pine	7,492	7,384	108	--
White pine	8,863	8,863	--	--
Spruce	233	232	1	--
Tamarack	--	--	--	--
Total	23,713	23,604	109	--
Hardwoods				
Ash	2,971	2,951	20	--
Aspen	43,113	42,967	146	--
Balsam poplar	74	74	--	--
Basswood	12,042	11,895	147	--
Beech	927	927	--	--
White birch	5,867	5,762	105	--
Yellow birch	4,185	4,128	57	--
Cottonwood	79	79	--	--
Elm	5,440	5,438	2	--
Hickory	213	213	--	--
Hard maple	30,769	30,509	260	--
Soft maple	9,140	8,991	149	--
Red oak	14,992	13,329	1,663	--
White oak	1,027	1,012	15	--
Walnut	--	--	--	--
Other hardwoods	389	373	16	--
Total	131,228	128,648	2,580	--
All species	154,941	152,252	2,689	--

(Table 14 continued on next page)

[1/] International 1/4-inch rule.

(Table 14 continued)

NORTHWEST UNIT

Species group	All states	State of destination		
		Wisconsin	Michigan	Minnesota
Softwoods				
Cedar	500	500	--	--
Balsam fir	376	376	--	--
Hemlock	352	334	18	--
Jack pine	3,892	586	--	3,306
Red pine	9,794	5,842	2	3,950
White pine	9,536	9,231	2	303
Spruce	182	158	24	--
Tamarack	1	--	1	--
Total	24,633	17,027	47	7,559
Hardwoods				
Ash	2,331	2,311	20	--
Aspen	22,025	21,971	54	--
Balsam poplar	--	--	--	--
Basswood	9,035	8,979	56	--
Beech	--	--	--	--
White birch	5,938	5,936	2	--
Yellow birch	1,488	1,390	98	--
Cottonwood	--	--	--	--
Elm	1,533	1,478	55	--
Hickory	48	48	--	--
Hard maple	11,590	11,104	486	--
Soft maple	4,333	4,301	32	--
Red oak	25,116	25,115	1	--
White oak	4,348	4,348	--	--
Walnut	108	108	--	--
Other hardwoods	191	189	2	--
Total	88,084	87,278	806	--
All species	112,717	104,305	853	7,559

CENTRAL UNIT

Softwoods				
Cedar	249	249	--	--
Balsam fir	10	10	--	--
Hemlock	258	258	--	--
Jack pine	1,035	1,035	--	--
Red pine	3,520	3,520	--	--
White pine	5,963	5,963	--	--
Spruce	1	1	--	--
Tamarack	--	--	--	--
Total	11,036	11,036	--	--
Hardwoods				
Ash	3,341	3,337	--	4
Aspen	10,438	10,411	--	27
Balsam poplar	--	--	--	--
Basswood	5,508	5,503	--	5
Beech	67	67	--	--
White birch	722	722	--	--
Yellow birch	486	486	--	--
Cottonwood	--	--	--	--
Elm	867	855	--	12
Hickory	320	318	--	2
Hard maple	7,908	7,903	--	5
Soft maple	6,391	6,386	--	5
Red oak	40,963	40,747	--	216
White oak	8,765	8,646	--	119
Walnut	113	113	--	--
Other hardwoods	229	229	--	--
Total	86,118	85,723	--	395
All species	97,154	96,759	--	395

(Table 14 continued on next page)

(Table 14 continued)

Species group	All states	State of destination		
		Wisconsin	Michigan	Minnesota
SOUTHWEST UNIT				
Softwoods				
Cedar	15	15	--	--
Balsam fir	--	--	--	--
Hemlock	--	--	--	--
Jack pine	40	40	--	--
Red pine	2,265	2,265	--	--
White pine	1,403	1,403	--	--
Spruce	--	--	--	--
Tamarack	--	--	--	--
Total	3,723	3,723	--	--
Hardwoods				
Ash	1,526	1,515	--	11
Aspen	3,064	2,983	--	81
Balsam poplar	--	--	--	--
Basswood	5,076	5,061	--	15
Beech	3	3	--	--
White birch	590	590	--	--
Yellow birch	42	42	--	--
Cottonwood	281	281	--	--
Elm	1,549	1,507	--	42
Hickory	1,217	1,209	--	8
Hard maple	7,191	7,176	--	15
Soft maple	2,000	1,985	--	15
Red oak	72,498	71,833	--	665
White oak	19,453	19,086	--	367
Walnut	446	446	--	--
Other hardwoods	676	676	--	--
Total	115,612	114,393	--	1,219
All species	119,335	118,116	--	1,219
SOUTHEAST UNIT				
Softwoods				
Cedar	423	423	--	--
Balsam fir	3	3	--	--
Hemlock	127	127	--	--
Jack pine	3	3	--	--
Red pine	142	142	--	--
White pine	722	722	--	--
Spruce	18	18	--	--
Tamarack	11	11	--	--
Total	1,449	1,449	--	--
Hardwoods				
Ash	1,642	1,642	--	--
Aspen	414	414	--	--
Balsam poplar	11	11	--	--
Basswood	1,489	1,489	--	--
Beech	299	299	--	--
White birch	170	170	--	--
Yellow birch	36	36	--	--
Cottonwood	195	195	--	--
Elm	241	241	--	--
Hickory	153	153	--	--
Hard maple	2,340	2,340	--	--
Soft maple	1,985	1,985	--	--
Red oak	10,543	10,543	--	--
White oak	4,631	4,631	--	--
Walnut	102	102	--	--
Other hardwoods	252	252	--	--
Total	24,503	24,503	--	--
All species	25,952	25,952	--	--

Table 15.--Sawlog production by Forest Survey Unit, county, and species group, Wisconsin, 1986

(In thousand board feet)[1/]

Unit and county	All species	Species group												
		Cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tamarack	Ash	Aspen	Balsam poplar	Basswood	Beech
Northeast Unit														
Florence	11,773	323	26	825	26	427	296	37	--	102	2,916	--	885	--
Forest	27,623	370	38	605	--	1,520	657	60	--	359	12,432	--	2,399	2
Langlade	10,728	210	32	194	52	722	475	4	--	216	2,547	--	1,088	25
Lincoln	9,669	85	52	50	26	424	709	20	--	377	1,485	--	885	28
Marinette	23,939	500	52	174	287	902	707	44	--	466	9,034	74	890	66
Menominee	13,652	60	--	64	--	--	2,676	--	--	48	589	--	1,996	648
Oconto	19,026	240	26	396	54	1,246	351	--	--	501	6,891	--	1,010	43
Oneida	12,733	497	92	260	130	1,070	1,094	35	--	174	3,125	--	772	3
Shawano	14,320	109	1	83	--	96	759	--	--	605	1,369	--	1,581	112
Vilas	11,478	526	58	342	260	1,085	1,139	33	--	123	2,725	--	536	--
Total	154,941	2,920	377	2,993	835	7,492	8,863	233	--	2,971	43,113	74	12,042	927
Northwest Unit														
Ashland	6,673	27	99	26	10	717	1,087	61	--	124	774	--	802	--
Barron	8,374	--	1	--	2	123	663	1	--	142	2,703	--	655	--
Bayfield	11,347	--	31	--	1,178	3,028	1,343	8	1	65	744	--	273	--
Burnett	5,164	--	--	--	1,122	578	544	--	--	84	942	--	136	--
Douglas	5,111	1	13	--	736	872	344	6	--	32	591	--	72	--
Iron	8,640	468	71	186	--	703	1,000	47	--	122	1,980	--	505	--
Polk	5,531	--	--	--	100	25	369	--	--	183	812	--	254	--
Price	11,914	4	105	59	8	513	764	33	--	371	2,898	--	1,340	--
Rusk	16,004	--	4	--	7	87	560	2	--	429	4,822	--	2,178	--
Sawyer	16,745	--	11	71	45	1,264	1,558	8	--	417	2,762	--	1,401	--
Taylor	8,301	--	39	10	59	680	567	15	--	283	698	--	947	--
Washburn	8,913	--	2	--	625	1,204	737	1	--	79	2,299	--	472	--
Total	112,717	500	376	352	3,892	9,794	9,536	182	1	2,331	22,025	--	9,035	--
Central Unit														
Adams	327	--	--	--	13	21	240	--	--	5	8	--	13	--
Chippewa	9,745	1	1	--	--	111	939	--	--	363	1,581	--	480	--
Clark	16,268	--	--	--	5	178	475	--	--	946	1,873	--	1,268	--
Eau Claire	3,693	--	--	--	11	188	188	--	--	110	71	--	98	--
Jackson	6,686	--	--	--	958	1,347	544	--	--	72	38	--	34	--
Juneau	5,832	--	--	--	--	22	193	--	--	199	676	--	193	--
Marathon	18,847	37	9	99	2	108	656	1	--	759	1,543	--	1,745	32
Marquette	519	--	--	--	--	28	124	--	--	13	5	--	9	--
Monroe	9,671	--	--	--	10	228	312	--	--	29	242	--	248	--
Portage	5,147	125	--	1	33	361	751	--	--	128	548	--	180	2
Waupaca	13,176	86	--	158	--	666	865	--	--	416	3,474	--	737	33
Waushara	2,323	--	--	--	--	185	290	--	--	67	86	--	155	--
Wood	4,920	--	--	--	3	77	386	--	--	234	293	--	348	--
Total	97,154	249	10	258	1,035	3,520	5,963	1	--	3,341	10,438	--	5,508	67

(Table 15 continued on next page)

[1/] International 1/4-inch rule.

(Table 15 continued)

Unit and county	All species	Species group												
		Cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tamarack	Ash	Aspen	Balsam poplar	Basswood	Beech
Southwest Unit														
Buffalo	14,356	--	--	--	--	2	15	--	--	177	1,028	--	526	--
Crawford	12,949	--	--	--	--	1	2	--	--	60	37	--	430	--
Dunn	13,623	--	--	--	--	1,560	1,160	--	--	442	558	--	835	--
Grant	5,839	--	--	--	1	4	11	--	--	35	50	--	329	--
Iowa	6,839	12	--	--	--	2	30	--	--	28	40	--	295	3
La Crosse	13,536	--	--	--	37	148	3	--	--	8	98	--	348	--
Lafayette	116	--	--	--	--	--	--	--	--	--	--	--	29	--
Pepin	3,783	1	--	--	--	18	6	--	--	63	256	--	283	--
Pierce	3,593	--	--	--	--	19	31	--	--	93	76	--	356	--
Richland	6,702	--	--	--	--	--	17	--	--	85	234	--	369	--
St. Croix	3,128	--	--	--	--	509	30	--	--	117	78	--	298	--
Sauk	9,977	2	--	--	1	2	7	--	--	226	301	--	391	--
Trempealeau	10,272	--	--	--	--	--	89	--	--	111	169	--	60	--
Vernon	14,622	--	--	--	1	--	2	--	--	81	139	--	527	--
Total	119,335	15	--	--	40	2,265	1,403	--	--	1,526	3,064	--	5,076	3
Southeast Unit														
Brown	1,823	--	--	32	--	--	56	--	--	190	70	--	52	32
Calumet	404	--	--	--	--	--	2	--	--	123	2	--	27	--
Columbia	3,230	--	--	--	--	2	3	--	--	59	57	--	230	1
Dane	2,091	15	--	--	1	1	2	--	--	22	32	--	14	2
Dodge	1,776	4	--	--	--	--	--	--	--	38	12	--	213	15
Door	1,679	149	3	53	--	131	282	16	11	107	105	11	51	25
Fond du Lac	984	--	--	--	--	--	--	--	--	26	--	--	55	1
Green	490	--	--	--	--	--	--	1	--	7	--	--	3	--
Green Lake	181	--	--	--	--	1	--	--	--	--	5	--	--	--
Jefferson	561	--	--	--	--	--	--	--	--	11	--	--	7	1
Kenosha	37	--	--	--	--	--	--	1	--	1	--	--	--	--
Kewaunee	721	47	--	8	--	3	56	--	--	63	16	--	32	11
Manitowoc	2,279	199	--	34	2	--	253	--	--	228	61	--	98	56
Outagamie	915	--	--	--	--	3	14	--	--	129	28	--	72	31
Ozaukee	14	1	--	--	--	--	--	--	--	5	--	--	1	1
Racine	61	3	--	--	--	--	--	--	--	1	--	--	--	1
Rock	729	--	--	--	--	1	--	--	--	12	--	--	2	1
Sheboygan	4,646	5	--	--	--	--	54	--	--	420	22	--	291	105
Walworth	636	--	--	--	--	--	--	--	--	8	--	--	31	1
Washington	1,729	--	--	--	--	--	--	--	--	138	--	--	245	15
Waukesha	205	--	--	--	--	--	--	--	--	32	--	--	11	--
Winnebago	761	--	--	--	--	--	--	--	--	22	4	--	54	--
Total	25,952	423	3	127	3	142	722	18	11	1,642	414	11	1,489	299
State Total	510,099	4,107	766	3,730	5,805	23,213	26,487	434	12	11,811	79,054	85	33,150	1,296

(Table 15 continued on next page)

(Table 15 continued)

Unit and county	Species group										
	White birch	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Other hard-woods
Northeast Unit											
Florence	384	1,402	--	154	--	3,336	349	260	12	--	13
Forest	842	489	26	1,357	5	4,824	1,004	493	48	--	93
Langlade	481	150	--	153	33	2,681	717	820	71	--	57
Lincoln	419	234	--	210	36	2,024	1,407	1,096	71	--	31
Marinette	1,329	174	5	469	3	2,142	1,474	4,885	244	--	18
Menominee	--	864	--	65	11	5,405	--	1,193	22	--	11
Oconto	762	104	48	2,407	56	1,854	1,156	1,760	97	--	24
Oneida	800	291	--	201	11	2,642	727	736	59	--	14
Shawano	153	149	--	252	58	3,589	1,743	3,175	370	--	116
Vilas	697	328	--	172	--	2,272	563	574	33	--	12
Total	5,867	4,185	79	5,440	213	30,769	9,140	14,992	1,027	--	389
Northwest Unit											
Ashland	351	233	--	111	--	1,117	251	838	40	--	5
Barron	283	3	--	59	1	251	144	2,529	796	--	18
Bayfield	1,280	21	--	62	--	339	65	2,685	213	--	11
Burnett	272	2	--	35	1	121	34	923	365	--	5
Douglas	234	1	--	23	--	69	24	1,969	119	--	5
Iron	434	213	--	113	--	1,771	328	681	11	--	7
Polk	67	4	--	69	1	262	101	2,462	811	--	11
Price	656	486	--	285	--	2152	897	1198	134	--	11
Rusk	418	142	--	290	1	1,801	869	3,791	514	43	46
Sawyer	971	174	--	248	--	2,055	476	4,523	714	--	47
Taylor	333	208	--	193	43	1,472	1,101	1,336	236	65	16
Washburn	639	1	--	45	1	180	43	2,181	395	--	9
Total	5,938	1,488	--	1,533	48	11,590	4,333	25,116	4,348	108	191
Central Unit											
Adams	1	--	--	1	--	11	2	4	7	--	1
Chippewa	17	66	--	70	--	386	718	4,015	917	22	58
Clark	132	108	--	166	40	1,451	999	6,987	1,572	65	3
Eau Claire	1	--	--	12	--	48	74	2,367	524	--	1
Jackson	3	--	--	37	41	34	45	2,904	628	--	1
Juneau	14	11	--	64	49	315	265	2,867	926	--	38
Marathon	210	211	--	158	44	3,027	1,660	7,601	892	22	31
Marquette	--	--	--	1	--	5	18	275	40	--	1
Monroe	88	3	--	157	101	335	193	6,062	1,634	4	25
Portage	12	8	--	36	5	268	357	1,814	482	--	36
Waupaca	103	42	--	91	34	1,510	1,513	2,819	597	--	32
Waushara	15	--	--	32	6	137	175	1,013	161	--	1
Wood	126	37	--	42	0	381	372	2,235	385	--	1
Total	722	486	--	867	320	7,908	6,391	40,963	8,765	113	229

(Table 15 continued on next page)

(Table 15 continued)

Unit and county	Species group										
	White birch	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Other hard-woods
Southwest Unit											
Buffalo	75	--	78	154	86	169	251	9,733	1,962	9	91
Crawford	75	--	--	172	130	596	75	8,891	2,383	58	39
Dunn	37	39	1	112	5	787	431	6,280	1,268	--	108
Grant	16	--	23	70	17	483	79	3,552	1,027	89	53
Iowa	8	--	1	69	467	314	44	3,287	1,955	200	84
La Crosse	156	--	2	285	185	386	88	9,580	2,204	2	6
Lafayette	--	--	--	--	--	11	--	65	11	--	--
Pepin	70	--	15	25	7	196	71	2,259	394	31	88
Pierce	7	--	37	74	25	349	70	2,061	357	2	36
Richland	2	--	1	74	24	1,326	201	3,179	1,094	34	62
St. Croix	18	--	15	76	12	270	73	1,283	306	--	43
Sauk	6	3	1	165	68	720	413	5,545	2,059	16	51
Trempealeau	21	--	106	56	38	17	51	7,715	1,832	2	5
Vernon	99	--	1	217	153	1,567	153	9,068	2,601	3	10
Total	590	42	281	1,549	1,217	7,191	2,000	72,498	19,453	446	676
Southeast Unit											
Brown	13	3	11	1	10	203	343	582	222	--	3
Calumet	--	--	5	1	0	47	53	116	28	--	--
Columbia	12	--	7	18	56	9	58	1,896	765	18	39
Dane	--	--	10	39	6	9	32	971	852	15	68
Dodge	--	--	1	28	6	215	164	685	379	2	14
Door	80	27	100	2	1	130	90	261	36	1	7
Fond du Lac	17	--	1	10	3	145	1	606	115	--	4
Green	--	--	--	11	2	12	5	217	207	9	16
Green Lake	2	--	1	1	1	1	1	123	39	--	6
Jefferson	--	--	--	13	4	13	7	272	172	35	26
Kenosha	--	--	--	5	--	--	2	8	17	1	2
Kewaunee	12	--	--	--	--	99	324	48	2	--	--
Manitowoc	17	5	22	6	--	224	107	774	193	--	--
Outagamie	7	1	--	5	3	91	219	149	162	--	1
Ozaukee	--	--	--	--	--	1	--	4	1	--	--
Racine	--	--	2	--	--	2	--	30	21	--	1
Rock	--	--	--	9	19	10	9	420	209	11	26
Sheboygan	10	--	3	48	32	757	415	2,070	403	2	9
Walworth	--	--	16	8	1	7	48	294	199	2	21
Washington	--	--	--	30	9	333	34	554	361	1	9
Waukesha	--	--	--	5	--	5	--	95	52	5	--
Winnebago	--	--	16	1	--	27	73	368	196	--	--
Total	170	36	195	241	153	2,340	1,985	10,543	4,631	102	252
State Total	13,287	6,237	555	9,630	1,951	59,798	23,849	164,112	38,224	769	1,737

Table 16.--Sawlog receipts in Wisconsin by Forest Survey Unit, species group, and State of origin, 1986

(In thousand board feet)[1/]

Species group	All States	State of origin				
		Wisconsin	Michigan	Minnesota	Iowa	Illinois
ALL UNITS						
Softwoods						
Cedar	6,411	4,107	2,267	37	--	--
Balsam fir	948	766	182	--	--	--
Hemlock	4,759	3,712	1,047	--	--	--
Jack pine	2,813	2,499	312	2	--	--
Red pine	20,612	19,153	1,459	--	--	--
White pine	27,902	26,182	1,706	14	--	--
Spruce	725	409	316	--	--	--
Tamarack	11	11	--	--	--	--
Total	64,181	56,839	7,289	53	--	--
Hardwoods						
Ash	12,710	11,756	834	110	10	--
Aspen	84,622	78,746	5,374	502	--	--
Balsam poplar	150	85	60	5	--	--
Basswood	36,217	32,927	2,675	595	20	--
Beech	1,298	1,296	2	--	--	--
White birch	13,960	13,180	690	90	--	--
Yellow birch	7,154	6,082	1,031	41	--	--
Cottonwood	767	555	--	212	--	--
Elm	9,942	9,519	276	147	--	--
Hickory	2,048	1,941	--	107	--	--
Hard maple	67,311	59,032	8,046	233	--	--
Soft maple	24,684	23,648	921	115	--	--
Red oak	167,160	161,567	739	4,466	200	188
White oak	39,019	37,723	1	1,195	50	50
Walnut	917	769	--	2	146	--
Other hardwoods	1,793	1,719	13	49	--	12
Total	469,752	440,545	20,662	7,869	426	250
All species	533,933	497,384	27,951	7,922	426	250
NORTHEAST UNIT						
Softwoods						
Cedar	4,765	3,242	1,523	--	--	--
Balsam fir	624	442	182	--	--	--
Hemlock	4,041	3,299	742	--	--	--
Jack pine	1,147	835	312	--	--	--
Red pine	10,115	8,815	1,300	--	--	--
White pine	12,391	11,053	1,338	--	--	--
Spruce	461	293	168	--	--	--
Tamarack	--	--	--	--	--	--
Total	33,544	27,979	5,565	--	--	--
Hardwoods						
Ash	3,963	3,342	621	--	--	--
Aspen	46,887	41,513	5,374	--	--	--
Balsam poplar	134	74	60	--	--	--
Basswood	15,364	14,323	1,041	--	--	--
Beech	1,123	1,121	2	--	--	--
White birch	7,939	7,255	684	--	--	--
Yellow birch	5,404	4,756	648	--	--	--
Cottonwood	168	168	--	--	--	--
Elm	6,279	6,003	276	--	--	--
Hickory	250	250	--	--	--	--
Hard maple	42,081	36,538	5,543	--	--	--
Soft maple	11,602	10,698	904	--	--	--
Red oak	18,390	17,651	739	--	--	--
White oak	1,454	1,453	1	--	--	--
Walnut	--	--	--	--	--	--
Other hardwoods	488	475	13	--	--	--
Total	161,526	145,620	15,906	--	--	--
All species	195,070	173,599	21,471	--	--	--

(Table 16 continued on next page)

[1/] International 1/4-inch rule.

(Table 16 continued)

NORTHWEST UNIT

Species group	All areas	State of origin				
		Wisconsin	Michigan	Minnesota	Iowa	Illinois
Softwoods						
Cedar	120	32	51	37	--	--
Balsam fir	284	284	--	--	--	--
Hemlock	126	10	116	--	--	--
Jack pine	588	586	--	2	--	--
Red pine	5,957	5,957	--	--	--	--
White pine	3,016	2,634	368	14	--	--
Spruce	106	93	13	--	--	--
Tamarack	--	--	--	--	--	--
Total	10,197	9,596	548	53	--	--
Hardwoods						
Ash	1,797	1,511	213	73	--	--
Aspen	19,226	18,771	--	455	--	--
Balsam poplar	--	--	--	--	--	--
Basswood	7,353	5,609	1,634	110	--	--
Beech	--	--	--	--	--	--
White birch	4,313	4,293	6	14	--	--
Yellow birch	1,056	672	383	1	--	--
Cottonwood	20	15	--	5	--	--
Elm	618	595	--	23	--	--
Hickory	6	5	--	1	--	--
Hard maple	7,535	4,932	2,503	100	--	--
Soft maple	1,863	1,830	17	16	--	--
Red oak	16,391	15,891	--	500	--	--
White oak	2,794	2,494	--	300	--	--
Walnut	--	--	--	--	--	--
Other hardwoods	40	40	--	--	--	--
Total	63,012	56,658	4,756	1,598	--	--
All species	73,209	66,254	5,304	1,651	--	--

CENTRAL UNIT

Softwoods						
Cedar	172	172	--	--	--	--
Balsam fir	37	37	--	--	--	--
Hemlock	315	126	189	--	--	--
Jack pine	1,075	1,075	--	--	--	--
Red pine	3,109	3,109	--	--	--	--
White pine	8,034	8,034	--	--	--	--
Spruce	135	--	135	--	--	--
Tamarack	--	--	--	--	--	--
Total	12,877	12,553	324	--	--	--
Hardwoods						
Ash	2,987	2,987	--	--	--	--
Aspen	11,751	11,751	--	--	--	--
Balsam poplar	--	--	--	--	--	--
Basswood	5,560	5,506	--	54	--	--
Beech	--	--	--	--	--	--
White birch	885	863	--	22	--	--
Yellow birch	623	623	--	--	--	--
Cottonwood	--	--	--	--	--	--
Elm	1,061	1,039	--	22	--	--
Hickory	229	218	--	11	--	--
Hard maple	7,472	7,461	--	11	--	--
Soft maple	5,979	5,968	--	11	--	--
Red oak	37,647	36,783	--	864	--	--
White oak	8,602	8,494	--	108	--	--
Walnut	253	253	--	--	--	--
Other hardwoods	334	334	--	--	--	--
Total	83,383	82,280	--	1,103	--	--
All species	96,260	94,833	324	1,103	--	--

(Table 16 continued on next page)

(Table 16 continued)

Species group	All areas	State of origin				
		Wisconsin	Michigan	Minnesota	Iowa	Illinois
SOUTHWEST UNIT						
Softwoods						
Cedar	15	15	--	--	--	--
Balsam fir	--	--	--	--	--	--
Hemlock	--	--	--	--	--	--
Jack pine	--	--	--	--	--	--
Red pine	374	374	--	--	--	--
White pine	2,474	2,474	--	--	--	--
Spruce	--	--	--	--	--	--
Tamarack	--	--	--	--	--	--
Total	2,863	2,863	--	--	--	--
Hardwoods						
Ash	1,670	1,623	--	37	10	--
Aspen	2,576	2,529	--	47	--	--
Balsam poplar	5	--	--	5	--	--
Basswood	5,594	5,143	--	431	20	--
Beech	--	--	--	--	--	--
White birch	703	649	--	54	--	--
Yellow birch	40	--	--	40	--	--
Cottonwood	473	266	--	207	--	--
Elm	1,671	1,569	--	102	--	--
Hickory	1,006	911	--	95	--	--
Hard maple	7,435	7,313	--	122	--	--
Soft maple	2,082	1,994	--	88	--	--
Red oak	81,042	77,740	--	3,102	200	--
White oak	20,053	19,216	--	787	50	--
Walnut	453	305	--	2	146	--
Other hardwoods	644	595	--	49	--	--
Total	125,447	119,853	--	5,168	426	--
All species	128,310	122,716	--	5,168	426	--
SOUTHEAST UNIT						
Softwoods						
Cedar	1,339	646	693	--	--	--
Balsam fir	3	3	--	--	--	--
Hemlock	277	277	--	--	--	--
Jack pine	3	3	--	--	--	--
Red pine	1,057	898	159	--	--	--
White pine	1,987	1,987	--	--	--	--
Spruce	23	23	--	--	--	--
Tamarack	11	11	--	--	--	--
Total	4,700	3,848	852	--	--	--
Hardwoods						
Ash	2,293	2,293	--	--	--	--
Aspen	4,182	4,182	--	--	--	--
Balsam poplar	11	11	--	--	--	--
Basswood	2,346	2,346	--	--	--	--
Beech	175	175	--	--	--	--
White birch	120	120	--	--	--	--
Yellow birch	31	31	--	--	--	--
Cottonwood	106	106	--	--	--	--
Elm	313	313	--	--	--	--
Hickory	557	557	--	--	--	--
Hard maple	2,788	2,788	--	--	--	--
Soft maple	3,158	3,158	--	--	--	--
Red oak	13,690	13,502	--	--	--	188
White oak	6,116	6,066	--	--	--	50
Walnut	211	211	--	--	--	--
Other hardwoods	287	275	--	--	--	12
Total	36,384	36,134	--	--	--	250
All species	41,084	39,982	852	--	--	250

Table 17.--Veneer log production and receipts in Wisconsin for selected years, 1946-1986

(In thousand board feet)[1/]

Year	Production	Receipts
1946	29,267	68,116
1948	32,026	71,791
1950	26,652	62,935
1952	29,956	59,500
1954	27,109	59,573
1956	30,403	66,949
1958	23,740	43,063
1960	25,467	51,298
1962	21,919	37,517
1963	25,203	41,918
1965	23,782	43,104
1966	22,867	42,162
1968	21,037	37,571
1970	15,814	29,896
1972	19,465	35,491
1973	32,224[2/]	37,804
1974	37,342[2/]	41,605
1975	31,692[2/]	33,294
1976	31,685[2/]	36,971
1980	20,863[2/]	27,903
1981	27,250[2/]	34,540
1984	22,989	33,403
1986	26,203	37,607

[1/] International 1/4-inch rule.

[2/] Includes Wisconsin veneer logs received at Iron Wood Products Co.; such receipts are not shown before 1973.

Table 18.--Veneer log production and receipts by species group in Wisconsin, 1981 and 1986

(In thousand board feet)[1/]

Species group	Production			Receipts		
	1981	1986	Change	1981	1986	Change
Softwoods						
Cedar	--	--	--	--	--	--
Balsam fir	--	--	--	--	--	--
Hemlock	--	--	--	--	--	--
Jack pine	--	54	54	--	--	--
Red pine	--	216	216	--	--	--
White pine	44	340	296	174	36	-138
Spruce	--	81	81	--	--	--
Total	44	691	647	174	36	-138
Hardwoods						
Ash	290	336	46	590	807	217
Aspen	12,971	3,178	-9,793	572	1,130	558
Balsam poplar	--	--	--	--	--	--
Basswood	1,042	2,772	1,730	1,575	3,306	1,731
Beech	4	--	-4	67	244	177
White birch	441	92	-349	576	375	-201
Yellow birch	1,291	771	-520	2,497	2,492	-5
Cottonwood	83	239	156	521	404	-117
Elm	1,988	184	-1,804	2,370	184	-2,186
Hickory	--	--	--	--	2	2
Hard maple	2,321	4,410	2,089	12,744	11,371	-1,373
Soft maple	511	1,816	1,305	1,179	2,492	1,313
Red oak	5,939	11,170	5,231	11,293	14,114	2,821
White oak	244	470	226	338	562	224
Walnut	34	38	4	--	38	38
Other species	47	36	-11	44	50	6
Total	27,206	25,512	-1,694	34,366	37,571	3,205
All species	27,250	26,203	-1,047	34,540	37,607	3,067

[1/] International 1/4-inch rule.

Table 19.--Veneer log production by species group and State of destination, Wisconsin, 1986

(In thousand board feet)[1/]

Species group	Total	Destination of wood	
		Wisconsin	Michigan
Softwoods			
Jack pine	54	--	54
Red pine	216	--	216
White pine	340	16	324
Spruce	81	--	81
Total	691	16	675
Hardwoods			
Ash	336	336	--
Aspen	3,178	1,018	2,160
Basswood	2,772	2,772	--
White birch	92	82	10
Yellow birch	771	720	51
Cottonwood	239	239	--
Elm	184	184	--
Hard maple	4,410	4,222	188
Soft maple	1,816	1,816	--
Red oak	11,170	11,149	21
White oak	470	470	--
Walnut	38	38	--
Other hardwoods	36	36	--
Total	25,512	23,082	2,430
All species	26,203	23,098	3,105

[1/] International 1/4-inch rule.

Table 20.--Veneer log production by Forest Survey Unit, county, and species group, Wisconsin, 1986

(In thousand board feet)[1/]

Unit and county	All species	Species group																
		Jack pine	Red pine	White pine	Spruce	Ash	Aspen	Bass-wood	White birch	Yellow birch	Cotton-wood	Elm	Hard maple	Soft maple	Red oak	White oak	Walnut	Other hardwoods
Northeast Unit																		
Florence	1,292	--	--	--	--	--	--	260	10	312	--	--	605	1	104	--	--	--
Forest	597	--	--	--	--	15	4	97	11	104	--	--	302	45	18	--	--	1
Langlade	876	--	--	--	--	21	41	163	1	35	--	--	185	160	258	9	--	3
Lincoln	184	--	--	--	--	16	9	53	1	20	--	--	34	15	34	1	--	1
Marinette	1,128	--	--	--	--	--	--	52	15	103	--	--	622	3	333	--	--	--
Menominee	179	--	--	--	--	--	--	--	--	--	--	--	157	22	--	--	--	--
Oconto	586	--	--	--	--	21	34	105	--	4	21	--	198	59	138	5	--	1
Oneida	39	--	--	--	--	3	--	8	5	23	--	--	--	--	--	--	--	--
Shawano	1,937	--	--	--	--	73	90	387	8	8	--	--	543	198	608	12	--	10
Vilas	567	--	135	162	--	--	270	--	--	--	--	--	--	--	--	--	--	--
Total	7,385	--	135	162	--	149	448	1,125	51	609	21	--	2,646	503	1,493	27	--	16
Northwest Unit																		
Ashland	1,939	--	54	108	54	11	1,080	--	8	16	--	21	587	--	--	--	--	--
Barron	2,030	--	--	3	--	102	291	202	16	--	--	119	587	2	703	5	--	--
Iron	972	54	27	54	27	--	810	--	--	--	--	--	--	--	--	--	--	--
Polk	394	--	--	3	--	12	1	40	7	--	--	19	--	4	301	7	--	--
Rusk	1,056	--	--	--	--	26	35	288	3	1	--	25	--	138	540	--	--	--
Sawyer	900	--	--	--	--	--	165	279	5	60	--	--	--	9	382	--	--	--
Washburn	451	--	--	--	--	--	189	102	--	--	--	--	--	4	156	--	--	--
Total	7,742	54	81	168	81	151	2,571	911	39	77	--	184	1,174	157	2,082	12	--	--
Central Unit																		
Chippewa	55	--	--	1	--	--	--	--	--	--	--	--	--	--	47	5	--	2
Clark	24	--	--	--	--	--	--	--	--	--	--	--	--	--	24	--	--	--
Eau Claire	202	--	--	2	--	--	--	--	--	--	--	--	--	--	177	21	--	2
Jackson	254	--	--	1	--	--	--	--	--	--	--	--	--	--	228	25	--	--
Marathon	1,026	--	--	--	--	14	47	156	1	77	--	--	171	34	513	10	--	3
Monroe	110	--	--	1	--	--	--	--	--	--	--	--	--	--	99	10	--	--
Portage	434	--	--	--	--	4	16	40	--	2	--	--	52	6	310	3	--	1
Waupaca	753	--	--	--	--	13	36	119	1	4	--	--	134	33	404	7	--	2
Waushara	169	--	--	--	--	3	10	26	--	1	--	--	35	4	73	2	15	--
Wood	242	--	--	--	--	--	--	10	--	--	--	--	31	--	201	--	--	--
Total	3,269	--	--	5	--	34	109	351	2	84	--	--	423	77	2,076	83	15	10

(Table 20 continued on next page)

[1/] International 1/4-inch rule.

(Table 20 continued)

Unit and county	All species	Species group																
		Jack pine	Red pine	White pine	Spruce	Ash	Aspen	Bass-wood	White birch	Yellow birch	Cotton-wood	Elm	Hard maple	Soft maple	Red oak	White oak	Walnut	Other hardwoods
Southwest Unit																		
Buffalo	858	--	--	--	--	--	--	6	--	--	63	--	--	3	733	52	--	1
Crawford	531	--	--	--	--	--	--	--	--	--	--	--	--	--	494	36	--	1
Dunn	541	--	--	2	--	--	--	7	--	--	--	--	36	4	460	31	--	1
Grant	693	--	--	--	--	--	--	--	--	--	--	--	--	--	640	52	--	1
La Crosse	471	--	--	2	--	--	--	--	--	--	--	--	--	--	432	36	--	1
Pepin	504	--	--	--	--	--	--	42	--	--	34	--	--	333	90	5	--	--
Pierce	572	--	--	--	--	--	--	14	--	--	79	--	--	332	136	10	--	1
Richland	360	--	--	--	--	--	--	73	--	--	--	--	--	--	265	21	--	1
St. Croix	63	--	--	--	--	--	--	--	--	--	--	--	--	--	57	5	--	1
Sauk	108	--	--	--	--	--	--	45	--	--	--	--	45	18	--	--	--	--
Trempealeau	1,292	--	--	--	--	--	31	73	--	--	--	--	--	330	821	36	--	1
Vernon	1,394	--	--	1	--	--	--	--	--	--	--	--	--	--	1,330	62	--	1
Total	7,387	--	--	5	--	--	31	260	--	--	176	--	81	1,020	5,458	346	--	10
Southeast Unit																		
Columbia	52	--	--	--	--	--	--	52	--	--	--	--	--	--	--	--	--	--
Dane	52	--	--	--	--	--	--	52	--	--	--	--	--	--	--	--	--	--
Kewaunee	58	--	--	--	--	--	--	--	--	--	--	--	42	16	--	--	--	--
Outagamie	189	--	--	--	--	1	15	12	--	1	42	--	32	41	35	1	9	--
Winnebago	69	--	--	--	--	1	4	9	--	--	--	--	12	2	26	1	14	--
Total	420	--	--	--	--	2	19	125	--	1	42	--	86	59	61	2	23	--
State Total	26,203	54	216	340	81	336	3,178	2,772	92	771	239	184	4,410	1,816	11,170	470	38	36

Table 21.--Veneer log receipts in Wisconsin by area of origin for selected years, 1946-1986

(In thousand board feet)[1/]

Year	All areas	Area of origin				
		Wisconsin	Michigan	Minnesota	Other States	Canada
1946	68,116	28,813	33,834	1,139	919	3,411
1948	71,791	31,553	27,052	4,811	1,066	7,309[2/]
1950	62,935	26,198	19,917	4,919	924	10,977[2/]
1952	59,500	28,899	15,775	5,826	1,516	7,484
1954	59,573	26,527	15,537	7,962	3,286	6,261
1956	66,949	30,298	18,932	7,221	3,405	7,093
1958	43,063	23,488	8,078	7,027	916	3,554
1960	51,298	24,249	8,659	8,380	5,207	4,803
1962	37,517	18,846	4,950	6,177	2,777	4,767
1963	41,918	23,788	5,918	6,148	1,726	4,338
1965	43,104	22,547	8,044	6,111	1,621	4,781
1966	42,162	20,458	8,265	5,207	2,642	5,590
1968	37,571	18,853	8,001	3,518	2,679	4,520
1970	29,896	15,148	7,347	2,951	1,747	2,703
1972	36,491	18,172	10,893	3,457	1,552	2,417
1973	37,804	19,643	10,922	4,083	1,950	1,206
1974	41,605	24,294	10,221	3,486	1,905	1,699
1975	33,294	20,379	9,009	2,136	1,567	203
1976	36,971	20,752	10,280	3,033	2,412	494
1980	27,903	14,299	9,029	2,468	1,587	520
1981	34,540	14,245	14,058	2,501	3,008	728
1984	33,403	20,575	9,385	2,079	1,225	139
1986	37,607	23,098	13,036	758	627	88

[1/] International 1/4-inch rule.

[2/] Includes nominal quantity from other countries.

Table 22.--Veneer log receipts in Wisconsin by species group and area of origin, 1986
(In thousand board feet)[1/]

Species group	All areas	Area of origin					
		Wisconsin	Michigan	Minnesota	Iowa	Illinois	Canada
Softwoods							
White pine	36	16	10	10	--	--	--
Total	36	16	10	10	--	--	--
Hardwoods							
Ash	807	336	3	10	312	146	--
Aspen	1,130	1,018	112	--	--	--	--
Basswood	3,306	2,772	370	151	6	7	--
Beech	244	--	244	--	--	--	--
White birch	375	82	269	19	--	--	5
Yellow birch	2,492	720	1,668	21	--	--	83
Cottonwood	404	239	--	165	--	--	--
Elm	184	184	--	--	--	--	--
Hickory	2	--	--	--	--	2	--
Hard maple	11,371	4,222	7,149	--	--	--	--
Soft maple	2,492	1,816	669	7	--	--	--
Red oak	14,114	11,149	2,506	339	104	16	--
White oak	562	470	36	36	10	10	--
Walnut	38	38	--	--	--	--	--
Other hardwoods	50	36	--	--	10	4	--
Total	37,571	23,082	13,026	748	442	185	88
All species	37,607	23,098	13,036	758	442	185	88

[1/] International 1/4-inch rule.

Table 23.--Production of poles, piling, commercial posts, and miscellaneous industrial roundwood products[1/] by Forest Survey Unit, county, and species group, Wisconsin, 1986

(In thousand cubic feet)

County	All species	Species group							
		Cedar	Jack pine	Red pine	White pine	Aspen	White Birch	Hard maple	Red oak
NORTHEAST UNIT									
Florence	32	12	--	4	--	16	--	--	--
Forest	25	--	--	--	--	25	--	--	--
Langlade	8	--	--	--	--	8	--	--	--
Marinette	408	110	--	2	--	296	--	--	--
Menominee	99	--	--	--	--	99	--	--	--
Oconto	416	21	--	--	--	395	--	--	--
Shawano	152	46	--	--	--	99	--	7	--
Total	1,140	189	--	6	--	938	--	7	--
NORTHWEST UNIT									
Barron	1,140	--	9	5	--	1,126	--	--	--
Burnett	170	--	31	123	16	--	--	--	--
Douglas	201	--	41	138	22	--	--	--	--
Iron	39	--	5	30	4	--	--	--	--
Polk	40	--	14	23	3	--	--	--	--
Price	1	1	--	--	--	--	--	--	--
Rusk	150	--	--	--	--	150	--	--	--
Washburn	523	--	224	135	14	150	--	--	--
Total	2,264	1	324	454	59	1,426	--	--	--
CENTRAL UNIT									
Chippewa	5	--	--	5	--	--	--	--	--
Eau Claire	136	--	--	--	--	132	4	--	--
Jackson	68	--	--	--	--	66	2	--	--
Waushara	1	--	--	--	--	--	--	--	1
Total	210	--	--	5	--	198	6	--	1
SOUTHWEST UNIT									
Buffalo	136	--	--	--	--	132	4	--	--
Dunn	85	--	--	10	--	75	--	--	--
Trempealeau	340	--	--	--	--	329	11	--	--
Total	561	--	--	10	--	536	15	--	--
State Total	4,175	190	324	475	59	3,098	21	7	1

[1/] Cabin logs, excelsior bolts, shingle bolts, charcoal bolts, and shaving bolts. Excludes fuelwood used by industry.

Table 24.--Output of industrial roundwood products by type of product and species group, Wisconsin, 1986

(In thousand cubic feet)

Species group	All products	Product					
		Pulpwood	Saw logs	Fuelwood	Veneer logs	Posts	Other products
Softwoods							
Cedar	1,052	--	862	--	--	158	32
Balsam fir	4,009	3,588	159	262	--	--	--
Hemlock	3,638	2,910	629	99	--	--	--
Jack pine	21,198	19,638	1,215	12	9	87	237
Red pine	22,968	18,292	3,940	226	35	227	248
White pine	6,169	1,557	4,499	--	54	59	--
Spruce	2,506	2,407	86	--	13	--	--
Tamarack	129	127	2	--	--	--	--
Total	61,669	48,519	11,392	599	111	531	517
Hardwoods							
Ash	6,676	4,453	2,102	69	52	--	--
Aspen	114,753	95,452	13,801	1,885	517	--	3,098
Balsam poplar	218	204	14	--	--	--	--
Basswood	8,764	2,197	5,905	209	453	--	--
Beech	362	138	224	--	--	--	--
White birch	22,872	20,320	2,360	159	12	--	21
Yellow birch	3,274	2,028	1,107	15	124	--	--
Cottonwood	130	--	91	--	39	--	--
Elm	4,996	3,264	1,703	--	29	--	--
Hickory	388	44	344	--	--	--	--
Hard maple	26,206	15,413	9,982	84	720	--	7
Soft maple	14,862	10,222	4,241	105	294	--	--
Red oak	34,892	4,112	28,731	236	1,812	--	1
White oak	7,912	895	6,688	255	74	--	--
Walnut	133	--	128	--	5	--	--
Other hardwoods	1,042	748	293	--	1	--	--
Total	247,480	159,490	77,714	3,017	4,132	0	3,127
All species	309,149	208,009	89,106	3,616	4,243	531	3,644

Table 25.--Residue produced at primary wood-using mills by type of material, type of use, and county, Wisconsin, 1986

(In thousand tons green weight)

NORTHEAST UNIT

County and type of use	Wood residue							
	Total		Coarse[1]		Fine[2]		Bark[3]	
	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods
Florence								
Fiber products	1.59	16.78	1.23	14.04	.36	2.74	--	--
Industrial fuel	.26	4.46	--	--	.26	4.46	.52	5.98
Miscellaneous[4]	.10	.98	--	--	.10	.98	--	--
Total	1.95	22.22	1.23	14.04	.72	8.18	.52	5.98
Forest								
Fiber products	5.21	31.77	4.48	28.72	.73	3.05	--	--
Charcoal	.12	1.14	--	.02	.12	1.12	--	.01
Industrial fuel	1.60	13.41	.10	2.41	1.50	11.00	1.90	13.25
Domestic fuel	.18	1.06	.18	1.06	--	--	.07	.44
Miscellaneous[4]	.41	3.57	--	--	.41	3.57	--	--
Not used	.24	1.11	.15	.70	.09	.41	.05	.30
Total	7.76	52.06	4.91	32.91	2.85	19.15	2.02	14.00
Langlade								
Fiber products	.10	17.06	.06	12.12	.04	4.94	--	--
Industrial fuel	.10	2.79	.10	1.67	--	1.12	.06	5.62
Domestic fuel	.09	2.04	.09	2.04	--	--	.04	.87
Miscellaneous[4]	.10	3.29	--	--	.10	3.29	--	.24
Not used	--	.22	--	.22	--	--	--	.09
Total	.39	25.40	.25	16.05	.14	9.35	.10	6.82
Lincoln								
Fiber products	--	3.62	--	3.62	--	--	--	--
Industrial fuel	.08	2.28	--	--	.08	2.28	--	1.54
Domestic fuel	.33	.66	.33	.66	--	--	.06	.25
Miscellaneous[4]	.11	.28	--	.03	.11	.25	--	.01
Not used	.35	.38	.22	.25	.13	.13	.15	.12
Total	.87	7.22	.55	4.56	.32	2.66	.21	1.92
Marinette								
Fiber products	.72	26.60	.72	24.83	--	1.77	--	--
Industrial fuel	.70	12.59	.19	2.54	.51	10.05	.41	16.70
Domestic fuel	.99	6.65	.97	6.64	.02	.01	.10	.87
Miscellaneous[4]	.84	13.73	.17	--	.67	13.73	.39	.67
Not used	.01	.84	.01	.27	--	.57	.29	1.72
Total	3.26	60.41	2.06	34.28	1.20	26.13	1.19	19.96

(Table 25 continued on next page)

[1] Suitable for chipping such as slabs, edgings, veneer cores, etc.
[2] Not suitable for chipping such as sawdust, veneer clippings, etc.
[3] Does not include bark at pulp, particleboard, and waferboard mills.
[4] Livestock bedding, mulch, small dimension, and specialty items.

(Table 25 continued)

County and type of use	Wood residue							
	Total		Coarse[1]		Fine[2]		Bark[3]	
	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods
Menominee								
Industrial fuel	5.61	21.75	3.55	13.75	2.06	8.00	1.51	5.69
Total	5.61	21.75	3.55	13.75	2.06	8.00	1.51	5.69
Oconto								
Fiber products	.81	14.70	.81	11.88	--	2.82	.29	--
Industrial fuel	.39	11.57	.31	2.21	.08	9.36	.12	3.70
Domestic fuel[4]	.07	.20	.07	.17	--	.03	--	.07
Miscellaneous[4]	.16	.97	.01	.35	.15	.62	.08	2.88
Not used	.45	.05	--	.01	.45	.04	--	--
Total	1.88	27.49	1.20	14.62	.68	12.87	.49	6.65
Oneida								
Fiber products	--	39.80	--	25.63	--	14.17	--	--
Industrial fuel	.06	.49	.05	.25	.01	.24	.02	11.01
Domestic fuel[4]	.09	.59	.09	.59	--	--	.01	.23
Miscellaneous[4]	--	.95	--	--	--	.95	--	--
Not used	.34	.04	.17	--	.17	.04	.10	.02
Total	.49	41.87	.31	26.47	.18	15.40	.13	11.26
Shawano								
Fiber products	1.88	28.96	1.49	25.45	.39	3.51	--	--
Industrial fuel	.09	13.26	--	3.06	.09	10.20	.13	8.56
Domestic fuel[4]	.12	.26	.12	.26	--	--	.05	.09
Miscellaneous[4]	.53	6.74	--	.63	.53	6.11	.47	4.52
Not used	.12	.52	.12	.52	--	--	.13	.22
Total	2.74	49.74	1.73	29.92	1.01	19.82	.78	13.39
Vilas								
Fiber products	38.75	40.31	28.60	38.40	10.15	1.91	--	--
Charcoal	--	1.19	--	.43	--	.76	--	--
Industrial fuel	5.87	1.78	--	--	5.87	1.78	5.95	5.85
Domestic fuel[4]	.02	.44	.02	.44	--	--	--	--
Miscellaneous[4]	.66	.18	--	--	.66	.18	--	--
Not used	.70	18.98	.45	.47	.25	18.51	5.18	11.06
Total	46.00	62.88	29.07	39.74	16.93	23.14	11.13	16.91
All counties								
Fiber products	49.06	219.60	37.39	184.69	11.67	34.91	.29	--
Charcoal	.12	2.33	--	.45	.12	1.88	--	.01
Industrial fuel	14.76	84.38	4.30	25.89	10.46	58.49	10.62	77.90
Domestic fuel[4]	1.89	11.90	1.87	11.86	.02	.04	.33	2.82
Miscellaneous[4]	2.91	30.69	.18	1.01	2.73	29.68	.94	8.32
Not used	2.21	22.14	1.12	2.44	1.09	19.70	5.90	13.53
Total	70.95	371.04	44.86	226.34	26.09	144.70	18.08	102.58

(Table 25 continued on next page)

[1] Suitable for chipping such as slabs, edgings, veneer cores, etc.
[2] Not suitable for chipping such as sawdust, veneer clippings, etc.
[3] Does not include bark at pulp, particleboard, and waferboard mills.
[4] Livestock bedding, mulch, small dimension, and specialty items.

(Table 25 continued)

NORTHWEST UNIT

County and type of use	Wood residue: Total		Coarse[1]		Fine[2]		Bark[3]	
	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods
Ashland								
Fiber products	1.66	17.04	1.05	8.35	.61	8.69	--	--
Industrial fuel	.14	4.00	--	.69	.14	3.31	.42	8.22
Domestic fuel[4]	.36	.35	.36	.35	--	--	.04	--
Miscellaneous[4]	.03	9.74	.03	5.85	--	3.89	.04	.35
Not used	.22	.01	.06	.01	.16	--	.09	--
Total	2.41	31.14	1.50	15.25	.91	15.89	.59	8.57
Barron								
Fiber products	--	12.73	--	12.16	--	.57	--	--
Industrial fuel	--	14.81	--	1.07	--	13.74	.80	7.14
Domestic fuel[4]	.42	1.30	.42	1.30	--	--	.17	.26
Miscellaneous[4]	.23	2.21	--	.33	.23	1.88	--	.01
Not used	4.04	.08	2.55	.03	1.49	.05	1.17	1.17
Total	4.69	31.13	2.97	14.89	1.72	16.24	2.14	8.58
Bayfield								
Industrial fuel	.20	7.48	.20	6.36	--	1.12	--	.55
Domestic fuel[4]	.23	5.03	.19	1.67	.04	3.36	.05	2.88
Miscellaneous[4]	.06	.06	--	--	.06	.06	--	--
Not used	.86	.34	.46	.11	.40	.23	.33	.05
Total	1.35	12.91	.85	8.14	.50	4.77	.38	3.48
Burnett								
Charcoal	.89	5.75	.89	5.05	--	.70	.38	.62
Industrial fuel	.29	3.30	.18	1.20	.11	2.10	1.46	2.04
Domestic fuel[4]	.38	1.56	.38	1.56	--	--	.16	.15
Miscellaneous[4]	.67	1.67	--	--	.67	1.67	--	.26
Not used	.08	.08	.02	--	.06	.08	.16	.26
Total	2.31	12.36	1.47	7.81	.84	4.55	2.16	3.33
Douglas								
Industrial fuel	1.83	2.75	1.16	1.74	.67	1.01	.49	.74
Domestic fuel[4]	.17	.22	.16	.22	.01	--	.05	--
Miscellaneous[4]	.01	--	--	--	.01	--	--	--
Not used	.06	.11	--	--	.06	.11	.02	.08
Total	2.07	3.08	1.32	1.96	.75	1.12	.56	.82
Iron								
Not used	.05	--	.03	--	.02	--	.01	--
Total	.05	--	.03	--	.02	--	.01	--

(Table 25 continued on next page)

[1] Suitable for chipping such as slabs, edgings, veneer cores, etc.
[2] Not suitable for chipping such as sawdust, veneer clippings, etc.
[3] Does not include bark at pulp, particleboard, and waferboard mills.
[4] Livestock bedding, mulch, small dimension, and specialty items.

(Table 25 continued)

County and type of use	Wood residue							
	Total		Coarse[1/]		Fine[2/]		Bark[3/]	
	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods
Polk								
Fiber products	.07	2.61	.07	2.61	--	--	--	--
Charcoal	--	2.47	--	2.47	--	--	--	1.05
Industrial fuel	.03	1.28	.01	.33	.02	.95	.04	1.39
Domestic fuel[4/]	--	.16	--	.16	--	--	--	.07
Miscellaneous[4/]	.03	2.44	.01	.33	.02	2.11	--	--
Not used	--	.38	--	--	--	.38	--	--
Total	.13	9.34	.09	5.90	.04	3.44	.04	2.51
Price								
Fiber products	.29	16.35	.29	11.46	--	4.89	--	--
Industrial fuel	.17	4.10	--	2.22	.17	1.88	.09	5.68
Domestic fuel[4/]	.08	.83	.08	.83	--	--	.02	.35
Miscellaneous[4/]	.04	1.67	--	--	.04	1.67	--	.13
Not used	--	--	--	--	--	--	--	--
Total	.58	22.95	.37	14.51	.21	8.44	.11	6.16
Rusk								
Fiber products	--	6.70	--	5.72	--	.98	--	--
Industrial fuel	--	6.16	--	4.34	--	1.82	--	4.55
Domestic fuel[4/]	.05	1.08	.05	1.08	--	--	.02	.20
Miscellaneous[4/]	.03	3.69	--	--	.03	3.69	--	--
Not used	.02	.01	.02	.01	--	--	--	--
Total	.10	17.64	.07	11.15	.03	6.49	.02	4.75
Sawyer								
Fiber products	.03	6.82	--	5.22	.03	1.60	--	.01
Industrial fuel	--	5.21	--	3.36	--	1.85	--	3.63
Domestic fuel[4/]	.43	.50	.43	.50	--	--	.19	.23
Miscellaneous[4/]	.17	1.70	--	--	.17	1.70	--	--
Not Used	.65	.50	.37	.22	.28	.28	.16	.10
Total	1.28	14.73	.80	9.30	.48	5.43	.35	3.97
Taylor								
Fiber products	--	1.10	--	--	--	1.10	--	--
Industrial fuel	2.71	4.19	1.71	3.27	1.00	.92	--	.72
Domestic fuel[4/]	.17	.45	.17	.45	--	--	.06	.18
Miscellaneous[4/]	.10	.13	--	--	.10	.13	.02	.01
Not used	--	--	--	--	--	--	.72	.67
Total	2.98	5.87	1.88	3.72	1.10	2.15	.80	1.58

(Table 25 continued on next page)

[1/] Suitable for chipping such as slabs, edgings, veneer cores, etc.
[2/] Not suitable for chipping such as sawdust, veneer clippings, etc.
[3/] Does not include bark at pulp, particleboard, and waferboard mills.
[4/] Livestock bedding, mulch, small dimension, and specialty items.

(Table 25 continued)

County and type of use	Wood residue							
	Total		Coarse[1]		Fine[2]		Bark[3]	
	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods
Washburn								
Fiber products	--	1.26	--	1.26	--	--	--	--
Industrial fuel	--	5.45	--	--	--	5.45	--	3.36
Domestic fuel[4]	.46	1.13	.46	1.13	--	--	.19	.26
Miscellaneous[4]	.42	.15	--	--	.42	.15	--	--
Not Used	2.77	5.29	1.85	5.09	.92	.20	.78	--
Total	3.65	13.28	2.31	7.48	1.34	5.80	.97	3.62
All counties								
Fiber products	2.05	64.61	1.41	46.78	.64	17.83	--	.01
Charcoal	.89	8.22	.89	7.52	--	.70	.38	1.67
Industrial fuel	5.37	58.73	3.26	24.58	2.11	34.15	3.30	38.02
Domestic fuel[4]	2.75	12.61	2.70	9.25	.05	3.36	.95	4.58
Miscellaneous[4]	1.79	23.46	.04	6.51	1.75	16.95	.06	.76
Not used	8.75	6.80	5.36	5.47	3.39	1.33	3.44	2.33
Total	21.60	174.43	13.66	100.11	7.94	74.32	8.13	47.37
CENTRAL UNIT								
Adams								
Industrial fuel	.05	2.65	--	--	.05	2.65	--	--
Domestic fuel[4]	.08	4.56	.08	4.56	--	--	--	--
Miscellaneous[4]	--	--	--	--	--	--	.03	1.94
Total	.13	7.21	.08	4.56	.05	2.65	.03	1.94
Chippewa								
Fiber products	.58	16.85	.41	14.36	.17	2.49	--	--
Industrial fuel	.07	6.43	--	1.12	.07	5.31	.14	7.53
Domestic fuel[4]	.04	2.08	.04	2.08	--	--	.01	.02
Miscellaneous[4]	.03	3.89	.01	.91	.02	2.98	.02	.17
Not used	--	--	--	--	--	--	.02	.16
Total	.72	29.25	.46	18.47	.26	10.78	.19	7.88
Clark								
Fiber products	--	4.76	--	4.34	--	.42	--	--
Industrial fuel	--	9.38	--	4.42	--	4.96	--	5.27
Domestic fuel[4]	.57	6.35	.57	5.44	--	.91	.24	.78
Miscellaneous[4]	.33	2.00	--	--	.33	2.00	--	--
Total	.90	22.49	.57	14.20	.33	8.29	.24	6.05

(Table 25 continued on next page)

[1] Suitable for chipping such as slabs, edgings, veneer cores, etc.
[2] Not suitable for chipping such as sawdust, veneer clippings, etc.
[3] Does not include bark at pulp, particleboard, and waferboard mills.
[4] Livestock bedding, mulch, small dimension, and specialty items.

(Table 25 continued)

County and type of use	Wood residue							
	Total		Coarse[1]		Fine[2]		Bark[3]	
	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods
Eau Claire								
Domestic fuel[4]	.01	.05	.01	.05	--	--	--	.02
Miscellaneous[4]	.02	.05	.01	.03	.01	.02	.01	.01
Not Used	--	.03	--	--	--	.03	--	--
Total	.03	.13	.02	.08	.01	.05	.01	.03
Jackson								
Fiber products	5.95	--	3.76	--	2.19	--	--	--
Industrial fuel	--	1.03	--	--	--	1.03	1.60	--
Domestic fuel[4]	.01	1.63	.01	1.63	--	--	--	.01
Miscellaneous[4]	.20	.64	.12	--	.08	.64	.05	.38
Not used	--	1.38	--	1.33	--	.05	--	.88
Total	6.16	4.68	3.89	2.96	2.27	1.72	1.65	1.27
Juneau								
Fiber products	--	.17	--	--	--	.17	--	--
Industrial fuel	--	2.46	--	2.17	--	.29	--	--
Domestic fuel[4]	.08	4.02	.08	4.00	--	.02	--	--
Miscellaneous[4]	.04	1.77	--	--	.04	1.77	.03	1.95
Not used	.02	1.42	.01	.04	.01	1.38	.01	.69
Total	.14	9.84	.09	6.21	.05	3.63	.04	2.64
Marathon								
Fiber products	--	21.01	--	18.08	--	2.93	--	--
Industrial fuel	.96	3.51	.96	--	--	3.51	.39	6.21
Domestic fuel[4]	.72	5.06	.70	3.03	.02	2.03	.24	.82
Miscellaneous[4]	.91	7.80	.03	2.67	.88	5.13	.04	2.68
Not used	.05	.22	--	--	.05	.22	--	.39
Total	2.64	37.60	1.69	23.78	.95	13.82	.67	10.10
Marquette								
Industrial fuel	--	.04	--	.04	--	--	--	--
Domestic fuel[4]	.39	.16	.39	.16	--	--	.17	.06
Miscellaneous[4]	.26	.09	--	--	.26	.09	--	--
Not used	.05	.03	.05	--	--	.03	.03	.03
Total	.70	.32	.44	.20	.26	.12	.20	.09
Monroe								
Industrial fuel	--	4.15	--	2.95	--	1.20	--	--
Domestic fuel[4]	.27	.32	.27	.32	--	--	.12	.14
Miscellaneous[4]	.16	.19	--	--	.16	.19	--	1.26
Not used	--	.52	--	--	--	.52	--	--
Total	.43	5.18	.27	3.27	.16	1.91	.12	1.40

(Table 25 continued on next page)

[1] Suitable for chipping such as slabs, edgings, veneer cores, etc.
[2] Not suitable for chipping such as sawdust, veneer clippings, etc.
[3] Does not include bark at pulp, particleboard, and waferboard mills.
[4] Livestock bedding, mulch, small dimension, and specialty items.

(Table 25 continued)

County and type of use	Wood residue							
	Total		Coarse[1]		Fine[2]		Bark[3]	
	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods
Portage								
Fiber products	.09	4.00	.07	2.84	.02	1.16	--	--
Industrial fuel	.02	2.22	--	1.09	.02	1.13	.03	1.68
Domestic fuel	.44	.61	.44	.61	--	--	.19	.26
Miscellaneous[4]	.28	.35	.01	--	.27	.35	.01	--
Not used	.35	--	.22	--	.13	--	.05	--
Total	1.18	7.18	.74	4.54	.44	2.64	.28	1.94
Waupaca								
Fiber products	--	5.65	--	5.06	--	.59	--	--
Industrial fuel	--	5.16	--	.16	--	5.00	--	4.43
Domestic fuel	.51	9.54	.51	9.54	--	--	.21	2.80
Miscellaneous[4]	.30	6.19	--	--	.30	6.19	--	--
Not used	.01	--	.01	--	--	--	--	--
Total	.82	26.54	.52	14.76	.30	11.78	.21	7.23
Waushara								
Fiber products	--	--	--	--	--	--	--	--
Industrial fuel	--	.02	--	.02	--	--	--	.01
Domestic fuel	.77	1.47	.77	1.46	--	.01	.02	.62
Miscellaneous[4]	.44	.84	--	--	.44	.84	.31	--
Not used	.03	--	.01	--	.02	--	.01	--
Total	1.24	2.33	.78	1.48	.46	.85	.34	.63
Wood								
Fiber products	6.88	.28	6.88	.24	--	.04	--	--
Industrial fuel	.76	4.40	.76	4.05	--	.35	.16	1.90
Domestic fuel	--	.22	--	.22	--	--	--	.01
Miscellaneous[4]	4.51	27.77	.04	15.98	4.47	11.79	3.11	6.89
Total	12.15	32.67	7.68	20.49	4.47	12.18	3.27	8.80
All counties								
Fiber products	13.50	52.72	11.12	44.92	2.38	7.80	--	--
Industrial fuel	1.86	41.45	1.72	16.02	.14	25.43	2.32	27.03
Domestic fuel	3.89	36.07	3.87	33.10	.02	2.97	1.20	5.54
Miscellaneous[4]	7.48	51.58	.22	19.59	7.26	31.99	3.61	15.28
Not used	.51	3.60	.30	1.37	.21	2.23	.12	2.15
Total	27.24	185.42	17.23	115.00	10.01	70.42	7.25	50.00

(Table 25 continued on next page)

[1] Suitable for chipping such as slabs, edgings, veneer cores, etc.
[2] Not suitable for chipping such as sawdust, veneer clippings, etc.
[3] Does not include bark at pulp, particleboard, and waferboard mills.
[4] Livestock bedding, mulch, small dimension, and specialty items.

(Table 25 continued)

SOUTHWEST UNIT

County and type of use	Wood residue							
	Total		Coarse[1]		Fine[2]		Bark[3]	
	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods
Buffalo								
Fiber products	--	9.65	--	9.65	--	--	--	--
Charcoal	--	.50	--	.50	--	--	--	--
Industrial fuel	--	5.14	--	--	--	5.14	--	3.11
Domestic fuel[4]	--	7.33	--	7.33	--	--	--	.95
Miscellaneous[4]	--	5.31	--	.17	--	5.14	--	3.46
Total	--	27.93	--	17.65	--	10.28	--	7.52
Crawford								
Fiber products	--	9.55	--	9.55	--	--	--	--
Industrial fuel	--	2.93	--	--	--	2.93	--	2.14
Domestic fuel[4]	--	.55	--	.55	--	--	--	--
Miscellaneous[4]	--	2.93	--	--	--	2.93	--	2.14
Not used	--	.02	--	--	--	.02	--	.01
Total	--	15.98	--	10.10	--	5.88	--	4.29
Dunn								
Fiber products	.02	.44	.02	.44	--	--	--	--
Charcoal	--	2.47	--	2.47	--	--	--	--
Industrial fuel	4.06	4.92	2.61	4.12	1.45	.80	1.16	4.55
Domestic fuel[4]	1.43	5.66	.95	5.63	.48	.03	.36	.02
Miscellaneous[4]	.14	6.54	--	--	.14	6.54	.02	.10
Not used	.03	--	--	--	.03	--	.02	.71
Total	5.68	20.03	3.58	12.66	2.10	7.37	1.56	5.38
Grant								
Industrial fuel	--	1.44	--	1.44	--	--	--	.61
Domestic fuel[4]	--	9.97	--	9.97	--	--	--	1.14
Miscellaneous[4]	.01	6.60	--	--	.01	6.60	--	3.08
Not used	.02	.18	.02	.08	--	.10	.01	.04
Total	.03	18.19	.02	11.49	.01	6.70	.01	4.87
Iowa								
Industrial fuel	.01	.19	--	--	.01	.19	--	.23
Domestic fuel[4]	.02	.55	.02	.55	--	--	--	--
Miscellaneous[4]	--	.10	--	--	--	.10	--	--
Not used	--	.03	--	--	--	.03	--	--
Total	.03	.87	.02	.55	.01	.32	--	.23
La Crosse								
Fiber products	--	50.25	--	50.25	--	--	--	--
Charcoal	--	17.01	--	--	--	17.01	--	--
Industrial fuel	--	6.61	--	.72	--	5.89	--	18.61
Domestic fuel[4]	--	.03	--	.03	--	--	--	.02
Miscellaneous[4]	--	6.78	--	--	--	6.78	--	3.07
Not used	--	.01	--	--	--	.01	--	--
Total	--	80.69	--	51.00	--	29.69	--	21.70

(Table 25 continued on next page)

[1] Suitable for chipping such as slabs, edgings, veneer cores, etc.
[2] Not suitable for chipping such as sawdust, veneer clippings, etc.
[3] Does not include bark at pulp, particleboard, and waferboard mills.
[4] Livestock bedding, mulch, small dimension, and specialty items.

(Table 25 continued)

County and type of use	Wood residue							
	Total		Coarse[1/]		Fine[2/]		Bark[3/]	
	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods
Lafayette								
Domestic fuel[4/]	.03	.07	.03	.07	--	--	.01	.03
Miscellaneous[4/]	.02	.04	--	--	.02	.04	--	--
Total	.05	.11	.03	.07	.02	.04	.01	.03
Pepin								
Fiber products	--	1.01	--	--	--	1.01	--	--
Charcoal	--	2.08	--	2.08	--	--	--	.96
Industrial fuel	--	.25	--	--	--	.25	--	.74
Domestic fuel[4/]	.01	4.56	.01	4.56	--	--	.01	.01
Miscellaneous[4/]	--	2.61	--	--	--	2.61	--	1.12
Not used	.01	.01	--	--	.01	.01	--	--
Total	.02	10.52	.01	6.64	.01	3.88	.01	2.83
Pierce								
Fiber products	--	.64	--	--	--	.64	--	--
Industrial fuel	--	.61	--	.40	--	.21	--	.78
Domestic fuel[4/]	.01	3.65	.01	3.65	--	--	--	.65
Miscellaneous[4/]	.01	1.50	--	--	.01	1.50	.01	.30
Total	.02	6.40	.01	4.05	.01	2.35	.01	1.73
Richland								
Fiber products	--	4.57	--	4.57	--	--	--	--
Industrial fuel	--	1.52	--	1.52	--	--	--	--
Domestic fuel[4/]	.01	1.76	.01	1.76	--	--	--	.75
Miscellaneous[4/]	--	4.57	--	--	--	4.57	--	2.59
Total	.01	12.42	.01	7.85	--	4.57	--	3.34
St. Croix								
Not used	--	--	--	--	--	--	--	--
Total	--	--	--	--	--	--	--	--
Sauk								
Fiber products	--	.25	--	.25	--	--	--	--
Industrial fuel	--	.16	--	--	--	.16	--	--
Domestic fuel[4/]	.01	11.87	.01	11.87	--	--	.01	1.64
Miscellaneous[4/]	.01	6.90	--	--	.01	6.90	--	3.52
Not used	.11	1.08	.07	.69	.04	.39	.03	.29
Total	.13	20.26	.08	12.81	.05	7.45	.04	5.45

(Table 25 continued on next page)

[1/] Suitable for chipping such as slabs, edgings, veneer cores, etc.
[2/] Not suitable for chipping such as sawdust, veneer clippings, etc.
[3/] Does not include bark at pulp, particleboard, and waferboard mills.
[4/] Livestock bedding, mulch, small dimension, and specialty items.

(Table 25 continued)

County and type of use	Wood residue							
	Total		Coarse[1/]		Fine[2/]		Bark[3/]	
	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods
Trempealeau								
Fiber products	--	14.47	--	14.47	--	--	--	--
Industrial fuel	--	11.77	--	3.75	--	8.02	--	5.00
Domestic fuel[4/]	.06	8.10	.06	8.10	--	--	.02	.95
Miscellaneous[4/]	.02	8.80	--	.94	.02	7.86	--	5.65
Not Used	--	--	--	--	--	--	--	2.45
Total	.08	43.14	.06	27.26	.02	15.88	.02	14.05
Vernon								
Fiber products	--	3.86	--	3.86	--	--	--	--
Industrial fuel	--	.26	--	.26	--	--	--	.11
Domestic fuel[4/]	--	1.75	--	1.75	--	--	--	.33
Miscellaneous[4/]	--	3.42	--	--	--	3.42	--	2.04
Total	--	9.29	--	5.87	--	3.42	--	2.48
All counties								
Fiber products	.02	94.69	.02	93.04	--	1.65	--	--
Charcoal	--	22.06	--	5.05	--	17.01	--	.96
Industrial fuel	4.07	35.80	2.61	12.21	1.46	23.59	1.16	35.88
Domestic fuel[4/]	1.58	55.85	1.10	55.82	.48	.03	.41	6.49
Miscellaneous[4/]	.21	56.10	--	1.11	.21	54.99	.03	27.07
Not used	.17	1.33	.09	.77	.08	.56	.06	3.50
Total	6.05	265.83	3.82	168.00	2.23	97.83	1.66	73.90
SOUTHEAST UNIT								
Brown								
Fiber products	--	4.64	--	4.64	--	--	--	--
Industrial fuel	--	.21	--	.08	--	.13	--	1.19
Miscellaneous[4/]	--	2.70	--	--	--	2.70	--	.85
Total	--	7.55	--	4.72	--	2.83	--	2.04
Calumet								
Domestic fuel[4/]	--	.16	--	.16	--	--	--	.07
Miscellaneous[4/]	--	.09	--	--	--	.09	--	--
Total	--	.25	--	.16	--	.09	--	.07
Columbia								
Domestic fuel[4/]	--	.20	--	.20	--	--	--	.08
Miscellaneous[4/]	--	.11	--	--	--	.11	--	--
Not used	--	.01	--	--	--	.01	--	--
Total	--	.32	--	.20	--	.12	--	.08

(Table 25 continued on next page)

[1/] Suitable for chipping such as slabs, edgings, veneer cores, etc.
[2/] Not suitable for chipping such as sawdust, veneer clippings, etc.
[3/] Does not include bark at pulp, particleboard, and waferboard mills.
[4/] Livestock bedding, mulch, small dimension, and specialty items.

(Table 25 continued)

County and type of use	Wood residue							
	Total		Coarse[1]		Fine[2]		Bark[3]	
	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods
Dane								
Industrial fuel	--	.27	--	.07	--	.20	--	.12
Domestic fuel[4]	.01	3.31	.01	3.31	--	--	--	1.35
Miscellaneous[4]	--	1.64	--	--	--	1.64	--	--
Not used	--	.45	--	.12	--	.33	--	.05
Total	.01	5.67	.01	3.50	--	2.17	--	1.52
Dodge								
Charcoal	--	2.25	--	2.25	--	--	--	--
Industrial fuel	.01	.01	.01	.01	--	--	--	--
Domestic fuel[4]	--	.57	--	.57	--	--	--	--
Miscellaneous[4]	--	1.65	--	--	--	1.65	--	1.21
Not used	--	--	--	--	--	--	--	--
Total	.01	4.48	.01	2.83	--	1.65	--	1.21
Door								
Domestic fuel[4]	.33	.27	.33	.27	--	--	.10	.11
Miscellaneous[4]	.18	.15	--	--	.18	.15	--	--
Not used	.01	.14	.01	.09	--	.05	--	.04
Total	.52	.56	.34	.36	.18	.20	.10	.15
Fond du Lac								
Industrial fuel	--	.01	--	.01	--	--	--	--
Domestic fuel[4]	--	.06	--	.06	--	--	--	.02
Miscellaneous[4]	--	.03	--	--	--	.03	--	--
Not used	--	.01	--	.01	--	--	--	--
Total	--	.11	--	.08	--	.03	--	.02
Green								
Domestic fuel[4]	--	.27	--	.27	--	--	--	.12
Miscellaneous[4]	--	.16	--	--	--	.16	--	--
Not used	--	--	--	--	--	--	--	--
Total	--	.43	--	.27	--	.16	--	.12
Green Lake								
Domestic fuel[4]	.01	--	.01	--	--	--	--	--
Miscellaneous[4]	--	--	--	--	--	--	--	--
Total	.01	--	.01	--	--	--	--	--

(Table 25 continued on next page)

[1] Suitable for chipping such as slabs, edgings, veneer cores, etc.
[2] Not suitable for chipping such as sawdust, veneer clippings, etc.
[3] Does not include bark at pulp, particleboard, and waferboard mills.
[4] Livestock bedding, mulch, small dimension, and specialty items.

(Table 25 continued)

County and type of use	Wood residue							
	Total		Coarse[1/]		Fine[2/]		Bark[3/]	
	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods
Jefferson								
Domestic fuel[4/]	--	.01	--	.01	--	--	--	--
Miscellaneous[4/]	--	.16	--	.10	--	.06	--	.04
Not Used	--	--	--	--	--	--	--	--
Total	--	.17	--	.11	--	.06	--	.04
Kewaunee								
Fiber products	.63	6.81	.63	6.81	--	--	--	--
Industrial fuel	.08	1.80	--	.92	.08	.88	--	1.35
Domestic fuel[4/]	.10	.63	.10	.63	--	--	.03	.27
Miscellaneous[4/]	.46	3.99	.07	--	.39	3.99	.27	1.76
Not used	.01	.01	.01	.01	--	--	.01	.16
Total	1.28	13.24	.81	8.37	.47	4.87	.31	3.54
Manitowoc								
Fiber products	.03	5.76	.03	5.76	--	--	--	--
Domestic fuel[4/]	1.04	1.28	1.04	1.28	--	--	.15	.17
Miscellaneous[4/]	.67	4.09	--	--	.67	4.09	.18	2.81
Not used	.09	.10	.08	.06	.01	.04	.03	.02
Total	1.83	11.23	1.15	7.10	.68	4.13	.36	3.00
Outagamie								
Fiber products	.54	17.30	.54	17.30	--	--	--	--
Industrial fuel	.31	1.56	--	--	.31	1.56	.31	7.36
Domestic fuel[4/]	.01	.02	.01	.02	--	--	--	--
Miscellaneous[4/]	.70	9.17	--	.36	.70	8.81	--	.18
Not used	1.19	--	1.19	--	--	--	.43	--
Total	2.75	28.05	1.74	17.68	1.01	10.37	.74	7.54
Racine								
Domestic fuel[4/]	.01	.12	.01	.12	--	--	--	--
Miscellaneous[4/]	--	.07	--	--	--	.07	--	--
Not used	--	--	--	--	--	--	--	.05
Total	.01	.19	.01	.12	--	.07	--	.05
Rock								
Domestic fuel[4/]	.01	.58	.01	.42	--	.16	--	.18
Miscellaneous[4/]	.01	.10	--	--	.01	.10	--	--
Not used	.01	.09	.01	.06	--	.03	--	.03
Total	.03	.77	.02	.48	.01	.29	--	.21

(Table 25 continued on next page)

[1/] Suitable for chipping such as slabs, edgings, veneer cores, etc.
[2/] Not suitable for chipping such as sawdust, veneer clippings, etc.
[3/] Does not include bark at pulp, particleboard, and waferboard mills.
[4/] Livestock bedding, mulch, small dimension, and specialty items.

(Table 25 continued)

County and type of use	Wood residue							
	Total		Coarse[1]		Fine[2]		Bark[3]	
	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods
Sheboygan								
Industrial fuel	.01	1.02	.01	1.02	--	--	.51	--
Domestic fuel	2.01	.22	2.01	.22	--	--	--	.01
Miscellaneous[4]	1.17	.72	--	--	1.17	.72	.19	.44
Not used	.02	.04	.01	.02	.01	.02	.02	.10
Total	3.21	2.00	2.03	1.26	1.18	.74	.72	.55
Walworth								
Industrial fuel	--	--	--	--	--	--	--	--
Domestic fuel[4]	--	1.54	--	1.25	--	.29	--	.53
Miscellaneous[4]	--	.22	--	--	--	.22	--	--
Not used	--	.22	--	--	--	.22	--	--
Total	--	1.98	--	1.25	--	.73	--	.53
Washington								
Domestic fuel[4]	--	.35	--	.35	--	--	--	.15
Miscellaneous[4]	--	.21	--	--	--	.21	--	--
Total	--	.56	--	.35	--	.21	--	.15
Waukesha								
Domestic fuel[4]	--	.14	--	.14	--	--	--	--
Miscellaneous[4]	--	.08	--	--	--	.08	--	.06
Total	--	.22	--	.14	--	.08	--	.06
Winnebago								
Domestic fuel[4]	.14	.03	.14	.03	--	--	--	.01
Miscellaneous[4]	.08	.01	--	--	.08	.01	.01	--
Not used	--	--	--	--	--	--	.05	--
Total	.22	.04	.14	.03	.08	.01	.06	.01
All counties								
Fiber products	1.20	34.51	1.20	34.51	--	--	--	--
Charcoal	--	2.25	--	2.25	--	--	--	--
Industrial fuel	.41	4.88	.02	2.11	.39	2.77	.82	10.02
Domestic fuel[4]	3.67	9.76	3.67	9.31	--	.45	.28	3.07
Miscellaneous[4]	3.27	25.35	.07	.46	3.20	24.89	.65	7.35
Not used	1.33	1.07	1.31	.37	.02	.70	.54	.45
Total	9.88	77.82	6.27	49.01	3.61	28.81	2.29	20.89
Total Wisconsin								
Fiber products	65.83	466.13	51.14	403.94	14.69	62.19	.29	.01
Charcoal	1.01	34.86	.89	15.27	.12	19.59	.38	2.64
Industrial fuel	26.47	225.24	11.91	80.81	14.56	144.43	18.22	188.85
Domestic fuel[4]	13.78	126.19	13.21	119.34	.57	6.85	3.17	22.50
Miscellaneous[4]	15.66	187.18	.51	28.68	15.15	158.50	5.29	58.78
Not used	12.97	34.94	8.18	10.42	4.79	24.52	10.06	21.96
Total	135.72	1,074.54	85.84	658.46	49.88	416.08	37.41	294.74

[1] Suitable for chipping such as slabs, edgings, veneer cores, etc.
[2] Not suitable for chipping such as sawdust, veneer clippings, etc.
[3] Does not include bark at pulp, particleboard, and waferboard mills.
[4] Livestock bedding, mulch, small dimension, and specialty items.

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Blyth, James E.; Whipple, James W.; Smith, W. Brad.
1989. **Wisconsin timber industry—an assessment of timber product output and use.** Resour. Bull. NC-112. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station. 62 p.

Discusses recent Wisconsin forest industry trends, production and receipts of pulpwood, saw logs, and veneer logs, and production of other timber products in 1986. Reports on logging residue, on timber removals, on wood and bark residue generated at primary wood-using mills, and on disposition of this mill residue.

KEY WORDS: Pulpwood, saw logs, veneer logs, residue

Our job at the North Central Forest Experiment Station is discovering and creating new knowledge and technology in the field of natural resources and conveying this information to the people who can use it. As a new generation of forests emerges in our region, managers are confronted with two unique challenges: (1) Dealing with the great diversity in composition, quality, and ownership of the forests, and (2) Reconciling the conflicting demands of the people who use them. Helping the forest manager meet these challenges while protecting the environment is what research at North Central is all about.